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THE
BUSINESS QUARTERLY

VOLUME XXV SPRING
NUMBER 1 1960

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Caveat Emptor

A recent issue of *Habitat,* the excellent magazine published by Central Mortgage and Housing Corporation, contained an article entitled *Caveat Emptor*—"let the buyer beware". In it, the author made a point that warrants emphasis in the midst of current cries for government intervention in economic affairs. Talking about people who blame their financial woes on pressure selling urging them to buy beyond their means, the author says:

"There is an answer to the financial dilemma in which most people find themselves. It will not be found in what they have to spend, but rather in spending what they have. It will not be found in wishing for more and more income, but in being good managers of their present income. It will not be found by having the buyer put a large portion of his future in the hands of sellers, but in returning to his ancestral habit of saving a part of his income. Consumers should learn the wisdom of saving up—not paying down.

"It is the purchaser's own business to make sure that he gets what he is paying for. The onus is on him alone.

"Let the buyer beware."

His point is one we need to be reminded of from time to time. There is a fine line between government action designed to protect the consumer from dishonest practices, and legislation which attempts to shift the consumer's fundamental responsibilities on to someone else's shoulders.

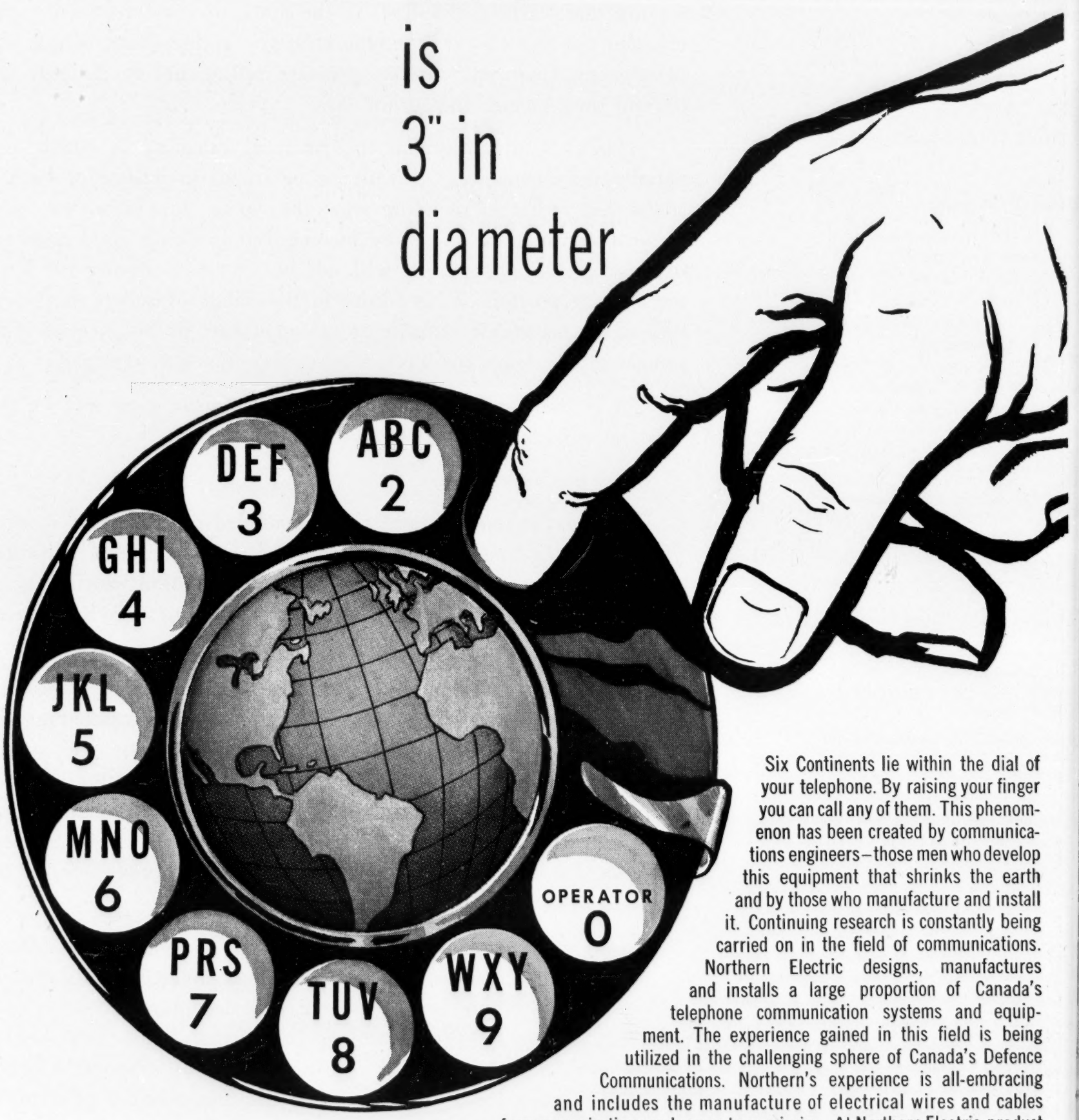
To some extent, consumer protective legislation is both desirable and necessary. Consumers must, for example, be protected against flagrant deception, mislabelling and other such clearcut cases of dishonesty, particularly in matters relating to individual health. Certainly, what is presented as a statement of fact must, indeed, be a fact. But "facts" are not always as simple or direct as they may seem, and it is by no means easy always to distinguish between fraud and fact.

Surely, in such cases it is better for government to err on the side of leniency — a man, after all, is presumed innocent until proved guilty. In cases where health and outright deception are not clearly involved, responsibility to evaluate, assess, and decide must be left to the individual. Because a few do not accept this responsibility and get "taken" does not mean that we should abandon the principle.

Caveat Emptor is a perfectly sound and time-honored principle of commercial activity, and it is encouraging to see a publication like *Habitat* reminding us of the fact.

—DAVID S. R. LEIGHTON

the world is 3" in diameter



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About Our Authors

Leland Hazard was born in Kansas City, Missouri. He received his B.A. degree from the University of Missouri and was admitted to the Missouri Bar in 1920 and the Pennsylvania Bar in 1940. From 1920-38 he practiced law in Kansas City. He then joined the Pittsburgh Plate Glass Company and in 1947 was appointed General Counsel, Vice President and Director. Since 1959 he has served this company in the capacity of Director and Consultant. Leland Hazard is also a Professor of Industrial Administration and Law at the Graduate School of Industrial Administration, Carnegie Institute of Technology.

A. N. McLeod is economist for the Toronto-Dominion Bank. From 1947 to 1955 he served as economist for the International Monetary Fund and during this period was a member of the missions to Haiti, Honduras, Costa Rica, Libya, Nicaragua, Saudi Arabia, and Guatemala. Previously he was economist in the Department of Finance, Ottawa. A native of Arcola, Saskatchewan, he received his B.A. from Queen's University and Ph.D. from Harvard University. He is the author of numerous articles, the most recent of which have appeared in *The Journal of Finance, The Canadian Banker, American Banker,* and *American Economic Review.*

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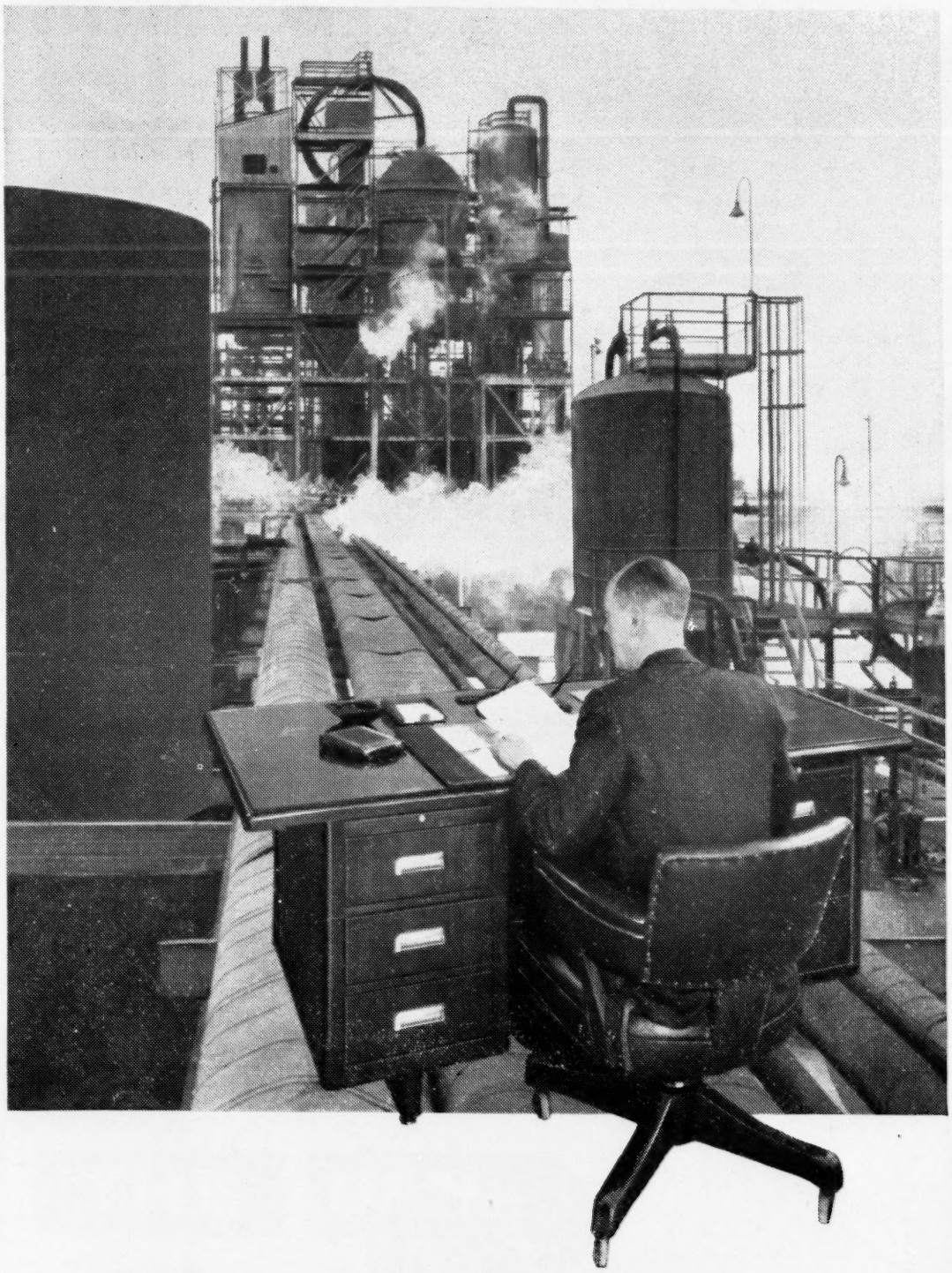
continued on next page



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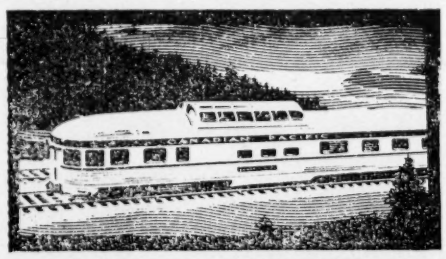

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About Our Authors cont.

headed Western's Management Training Course since its inception following World War II.

G. S. Blodgett received a Bachelor of Commerce degree from the University of Toronto in 1948. He was admitted to membership in the Institute of Chartered Accountants of Ontario in 1951 while articled to McDonald, Currie & Co. In the spring of 1952 he joined Philips Electronics Industries Ltd., and now holds the position of assistant treasurer.

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BANK OF MONTREAL *Business Review*

JUNE 24, 1959

WAY TO THE SEA

THE prospect of linking the shipping lanes of the world's oceans with the world's largest chain of fresh-water lakes in the industrial heartland of North America has offered an obvious challenge to the joint ingenuity of Canada and United States for more than half a century. The meeting of the Queen and the President on June 26 formally to open the St. Lawrence Seaway marks the achievement of a venture in international co-operation with few historical parallels.

Sixty-four years have elapsed since the idea of a Seaway was first mooted. It was in 1895 that a Deep Waterways Commission was created by the governments of the two countries to report on the feasibility of a deep channel from the Great Lakes to the Atlantic. By the early years of this century the scheme was clearly conceived on the broad lines along which it now stands accomplished — as a joint undertaking of the two countries and with the joint purposes of a ship channel and a hydro-electric power source. These essential aspects have never been lost to sight despite the legislative and technical difficulties that have beset their fulfilment. Even the basic engineering facts of today's St. Lawrence navigation and power project were specified as long ago as 1926 and 1927. In those years a joint board of engineers confirmed the feasibility of developing 2.2 million horsepower of electric energy in the International Rapids section and a Canadian advisory committee proposed a 27-foot channel from Montreal to Lake Ontario.

For some years thereafter the history of the project was punctuated by a succession of plans and proposals and of chronic delays in reaching firm decisions. While the Seaway scheme found many enthusiastic supporters it also met a large body of no less determined opponents and one of the strongest lobbies in American congressional history succeeded in defeating the enabling legislation under six Presidents, all of whom favoured it.

The Canadian position was, throughout, rather more clear-cut. The project must have seemed a daring and premature idea when first proposed. It was certainly a bold conception, providing as it did for transportation and power requirements far in excess of reasonable expectations at the time. Yet, despite her relatively smaller needs and resources, Canada was usually the prime mover.

As time passed, economic growth on both sides of the border brought the facilities offered by the project more within range of the reasonable and indeed within the realm of the necessary. If anything, the Canadian case for pressing forward with construction gained momentum more rapidly than the American to the point where Canada eventually decided to "go it alone" if U.S. co-operation should not be forthcoming. Action was finally initiated by Canadian legislation in the form of the St. Lawrence Seaway Authority Act of December 1951 and United States later joined in by passing the Wiley-Dondero Act through Congress in 1954. Construction of the Seaway, begun late that year, moved forward on a joint basis in 1955.

The task, which was accomplished on schedule in a little more than four years, was immense and complex and met with some unforeseen difficulties. That more than 50 million cubic yards of earth would have to be excavated and 2 million cubic yards of concrete poured was known in advance to more than fifty firms which held major contracts for the Canadian sections alone. But some problems that were not foreseen caused engineering difficulties after construction began. At the Beauharnois lock, contractors met hard underlying sandstone which held up all progress until a new drill had been devised to complete boring. Ice jams, high winds and flood waters hampered construction of cofferdams at the Montreal entrance and at the Cornwall power project, while dredging was complicated by unexpected physical obstacles.

Considerable expense was also incurred in relocating more than 6,500 people as well as towns, railways and roads on the north shore of the St. Lawrence between Cornwall and Prescott which was scheduled for flooding on completion of the Cornwall and Iroquois

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Ottawa Newsletter

PATRICK NICHOLSON

The Canadian voters did not give John Diefenbaker his record mandate in 1958 in order that he might preside over the liquidation of the Canadian Confederation. Mr. Diefenbaker certainly did not enter upon his sacred trust with any such objective in prospect, despite the unlucky augury that he is our 13th Prime Minister.

But the tide of world economic affairs is running fast, and the question is being asked seriously here whether we are not as impotent as flotsam to arrest or even to divert that tide.

Will this flood gather momentum, and sweep us along until we finally come to rest in a backwater disguised as the 51st, 52nd and 53rd stars on the star-spangled banner?

Our history, of course, is dotted with similar alarums.

In 1849 a powerful group of merchants and politicians in Montreal urged political union with the U.S. in their Annexation Manifesto. In 1891 the Liberal Party advocated Unrestricted Reciprocity while the U.S. Government blatantly tried to force us into unconditional economic surrender; Sir John A. Macdonald defeated this in his greatest but last electoral triumph. In 1911 the Liberal Party negotiated a Reciprocal Trade Agreement with the U.S. providing for two-way free trade in a wide range of manufactures and in raw materials. Again the Canadian voter proudly flexed his nationalist muscles, and convincingly rejected national subservience.

It takes a little time for contemporary opinion to view actualities in the perspective of history; hence even in Ottawa it is only slowly being recognized that we have arrived at another of these economic cross-roads, when the viability of our independence is questioned.

Lacking any inspired leadership after the war, we permitted the high opportunity of the fifties to be frittered away as The Man in the Grey Flannel Suit seduced us into a competitive extravagance far beyond our individual and national means.

Towards the end of that decade, our conscience was aroused by the protestations of a spokesman for the often-ridiculed and small Opposition Party in our Parliament. Conservative John Diefenbaker railed against the high degree of ownership of our industries and resource developments by U.S. capital, and against the America-first policies of the outposts maintained in Canada by U.S. Big Business. He carried an appeal so alluring that another of Canada's great electoral revolutions asserted our national wish for independence.

Once in power, however, timid inaction took the place of brave words.

The dramatic proposal for trade diversion was replaced by an aimless drift in the same old direction—our trading deficit rose, and so did the damaging artificial premium on our dollar.

The urge that foreign-owned subsidiaries in Canada should act like Canadian companies was implemented politically only by one small step, which halted the de-Canadianization of our insurance companies. This was offset by the repeal of the Magazine Tax imposed by the previous Liberal Administration to halt the "dumping" of U.S. journalistic products in Canada.

Before this session of Parliament opened, it had become obvious in Ottawa that Canadian industry cannot base mass production and competitive cost upon a domestic market of a mere 17 million consumers.

The Throne Speech proclaimed rightly that "international trade is one of the chief bases of Canadian prosperity" and that "the growing exports of various countries are presenting us with increasing opportunities for trade and problems of competition". But that speech contained no hint that Canada seeks full partnership in the "development of far-reaching importance now taking place in Europe", so opinion rapidly crystallized here to the effect that our only alternative course is towards the U.S.

Meanwhile labour's culpability in pricing us out of world markets was vividly illustrated by a study prepared here by the Canadian Labour Congress. This pointed out that the average output of a Canadian factory worker is only about three-quarters of that of the U.S. factory worker with whom he seeks wage parity (annual value of $4,760 in Canada compared to $6,146 in U.S., according to latest statistics available).

Nobody here seems to have considered yet whether the U.S. arms, into which drift will force us, are in fact open to receive us. Nor whether those arms would save us or strangle us.

U.S. plants would welcome 17 million additional consumers; but the removal of tariffs would lead to the dismantling of many branch plants in Canada, with consequent loss of jobs here. That an economic union would bring our workers prosperity on the level of the Pittsburgh steel-workers is unlikely.

A dispassionate assessment is that high incomes are not contagious, and that as U.S. citizens, we would either have to migrate — as now — to Pittsburgh to enjoy them, or else we would remain much as we now are under the Canadian ensign.

Washington Newsletter

J. M. MINIFIE

The most significant development within the free world this year may be the plan for broadening the Organization for European Economic Cooperation to include Canada and the United States, and the resultant possibility that an Atlanic area forum for economic fact-finding, discussion and recommendations may evolve.

Within this framework, the significant factor has been the apparent intention of the United States to supply leadership in order (1) to prevent the Outer Seven and the Common Market Six taking measures which might create a vested interest in European fission, (2) to bring the United States, and with it Canada, within the circle of tariff benefits and trade opportunities, and (3) to share some of the lonely burden of foreign aid with the newly wealthy European states.

Douglas Dillon, Under Secretary of State, supplied the initial impetus, and may be counted on to contribute momentum to the movement. He sounded Congress and found a generally favorable reaction to participation in an enlarged O.E.E.C., which would require the advice and consent of the Senate. He has the support of an important Democratic segment both of the Senate Foreign Relations and the House Foreign Affairs committees.

After the initial talks in Paris, two temporary bodies were set up. One is an eight-nation "Lender's Club"; the other is a special Committee of Twenty to study the European trade split. Ultimately, the United States hopes, the new O.E.E.C. will take over the functions of both.

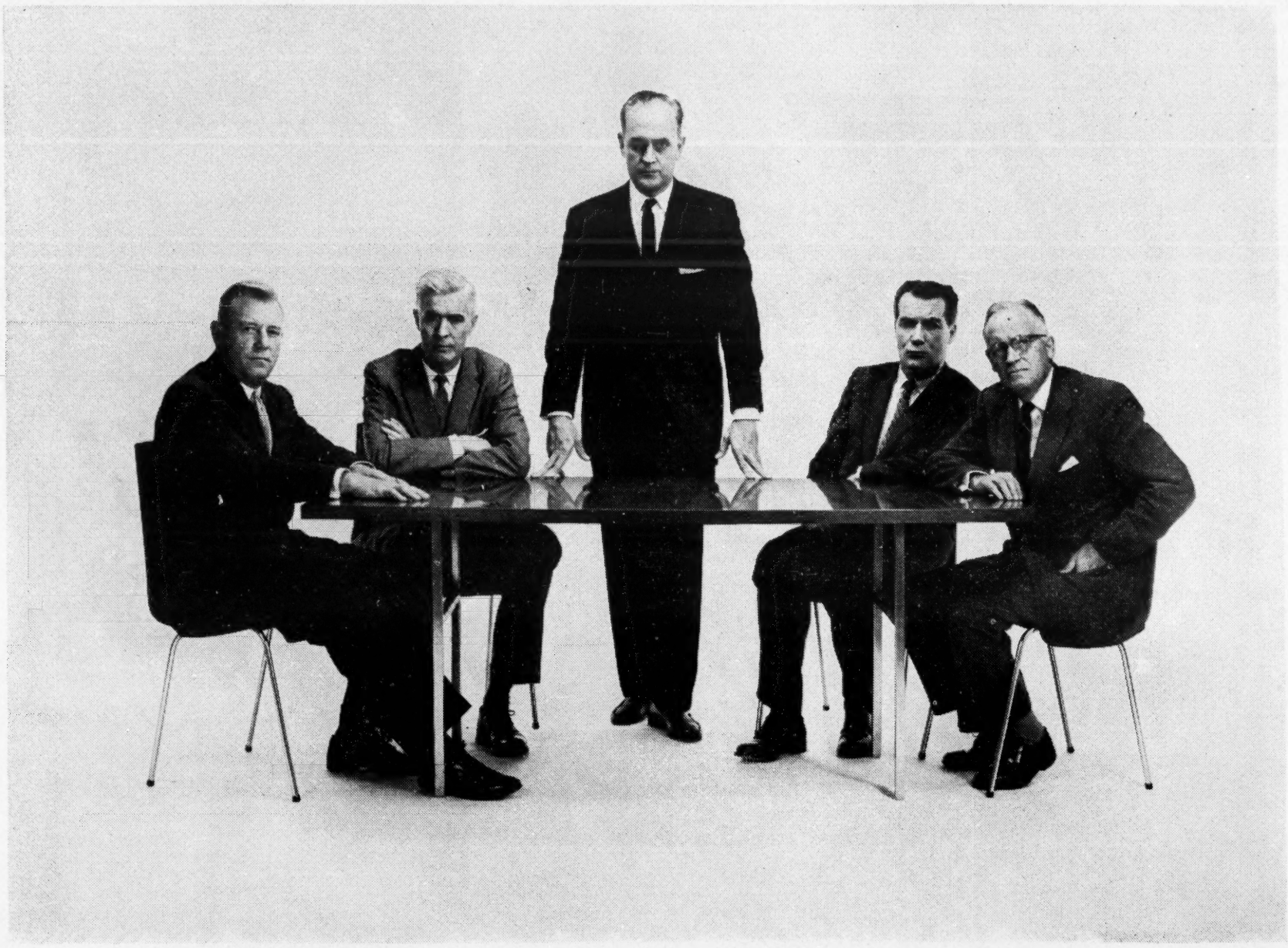
Preparatory work is going on in the United States to inform and influence Congress and the people. An impressive study was produced for the Foreign Affairs Committee by a mission of the subcommittee on Europe, headed by Rep. Frank M. Coffin, of Maine. This is the best current survey of the antecedents of the European Common Market and the Free Trade Association, and of their impact on the American—and Canadian—trading positions. It is worth Canadian attention.

The study calls attention to the reluctance of American exporters to appreciate the fact that the world of 1965 will be a world of many aggressive competitors, that the day is past when the United States was the only efficient, free, mass producer. The American manufacturer has not kept pace with consumer desires even at home; he is too apt to assume that the customer must take his notions of design, price and packaging or leave them alone—witness the automobile industry. Europeans are innovating faster than Americans, and U.S. producers seem ponderous, slow to make decisions, and far from daring in their attempts at imitations.

The American public is less aware than are Canadians of the facts of export trade, which accounts for only about four per cent of the United States' gross national product. The Coffin study finds that, except on rare occasions, the American public has not focused on the importance of being good traders; this is intimately associated with being a responsible free world leader; too often the citizen on Main Street looks on foreign trade as an economic threat; he does not see the asset side of the question; there is need to learn the basic facts of life in a world where nations, as they develop, will increasingly trade with each other; this is a task both for the formal channels of education, and for the informal ones — chambers of commerce, service clubs, trade associations and labour unions; these must develop awareness of what it means to be a trading nation before there can be a real "sea change" in U.S. policies.

Given these conditions, however, the new Europe at first will be somewhat constrictive of U.S. trade, but ultimately greatly expansive.

Primary producers such as Canada could be immediate beneficiaries if the Common Market were to adopt liberal agricultural policies. If trade patterns are allowed to develop freely, the increasing competition of European manufactures in the world market would go hand in hand with growing demands for a higher caloric intake from meat and dairy products; higher incomes would seek the costlier foods that the United States and Canada can supply. Protectionist pressures will seek to prevent free operation of this law. It should be the object of American policy to encourage this natural development.



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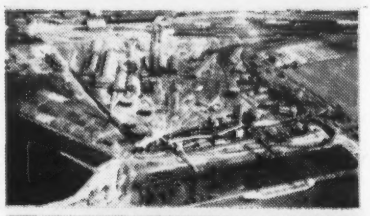
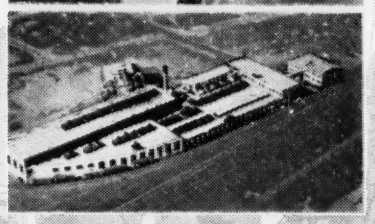


Hamilton Works

Canada Works

Parkdale Works



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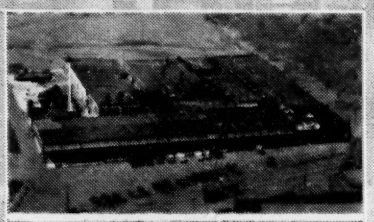

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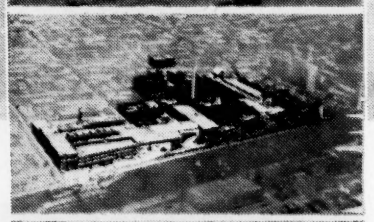

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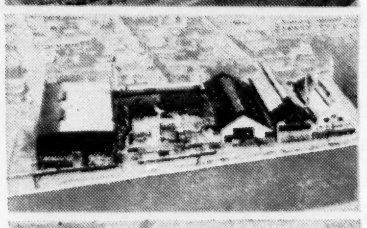

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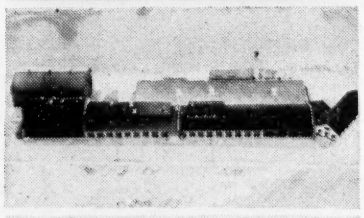

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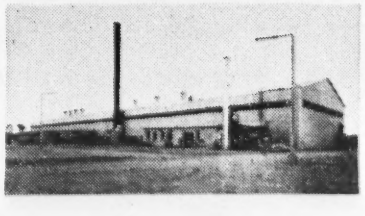

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What Next In U.S. Labor Legislation?

Past trends and future developments in U.S. labor legislation will unquestionably have great significance for Canadian business. The following article takes a long look back over U.S. labor history in order to highlight the trends that will mold the future. The author is widely-known in the U.S. and Canada as an outstanding businessman, educator and author.

LELAND HAZARD

Two significant labor-management events have just occurred. The American Congress passed further restrictive labor legislation—the Labor-Management Reporting and Disclosure Act of 1959—and the Eisenhower administration intervened to cut off full operation of the Taft-Hartley Act in the nation-wide steel strike. This is a good time for unions and management in America to consider whether events yet to come are casting their shadows before them.

Labor's score in Federal legislation during the last quarter century includes one great gain, the Wagner Act (1935) guaranteeing labor the right to organize unions and requiring management to bargain with them. At 12-year intervals since the Wagner Act there have been two moderate losses for labor. First, in the Taft-Hartley Act (1947) Congress curbed union violence, secondary boycotts, closed and union shops, and provided for a limited injunction against strikes involving national emergency. And now in the recent additional labor reform legislation Congress has placed even tighter restrictions on secondary boycotts, hot cargo agreements, and organizational picketing. Of greater import, the new law provides a workers' bill of rights against their own unions, requires reporting from unions, and gives policing powers over some internal union affairs to the Federal Government.

The pendulum has swung far to the right since the days of the late 1930's when an employer appeared at his peril before the Wagner Act's National Labor Relations Board. Since that time the Federal courts and the Congress have sharply dampened the revolutionary zeal with which the New Deal set out to equalize the power of labor with that of management.

But the American national policy is still strongly in support of unionism. The fundamentals of the Wagner Act are intact—the right of workers to unions of their own choosing and the obligation of employers to bargain with them. Still far from their goals are the rightists who would have the Congress bar industry-wide bargaining, restore to employers the right of injunction, and subject unions to the antitrust laws.

The union is as secure as the corporation. Labor leaders who attribute intent to destroy unionism to every important management proposal know better and fool only some of their constituents. But what union leaders may *do* with their unions is another question.

Labor's reception of the 1959 Landrum-Griffin Act was substantially more temperate than its reaction to the Taft-Hartley Act 12 years earlier. The phrase, "slave labor law", swept the ranks of unionism in 1947. President Truman vetoed the Act and both houses of Congress promptly passed the law over his veto. Repeal of the Taft-Hartley was an issue as late as the presidential election of 1952. But the Act has resisted all repeal efforts and stands without major modification. I predict that the Landrum-Griffin Act will also remain intact but that it will not diminish honest union power.

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Meanwhile management in the years preceding the Landrum-Griffin legislation indulged some delusions of its own. In early 1958 a New York congressman delivered on the floor of the House a speech which had wide circulation and great influence throughout the ranks of management. He proved to his satisfaction and to the alarm of industrialists that as the Congress was then constituted, no legislation could pass which labor opposed. Within 18 months of his speech and without significant changes in the composition of the Congress, the labor reform legislation of 1959 was passed—passed despite the vocal opposition of the principal national labor leaders.

A BACKWARD LOOK

It is clear that the American people are capable of lining up rather decisively on either side of the issue: how much labor power? The issue is not yet settled. More history is to come. To predict it one must cast a backward look. In 1806 in the Philadelphia Cortwainers case the Court had said:

> "A combination to raise their wages may be considered in a twofold point of view: one is to benefit themselves *** the other is to injure those who do not join their society. The rule of law condemns both."

Nevertheless unionism pressed its claim of workers' rights to organize.

In 1827 in the very city of the Cortwainers case the Mechanics' Union of Trades Association was formed. In 1834 came the National Trades Union; in 1866 the National Labor Union with a full-time president at $1,000 a year; in 1878 the Knights of Labor with the slogan, "An injury to one is the concern of all"; in 1881 the Federation of Organized Trades and Labor Unions sponsoring the movement for the eight-hour day; and in 1886 the American Federation of Labor with Samuel Gompers its first president and the philosophy of bread and butter unionism. During all this period the American law, yielding only to tolerate workers' organization for internal discipline, condemned the strike, the boycott, and other effective bargaining and organizational techniques as illegal conspiracies.

Not until almost a century following the Cortwainers case did a potent American judicial voice speak out for unionism. Dissenting from a majority decision holding picketing illegal in the Massachusetts Vegelahn case (1896), Justice O. W. Holmes said:

> "One of the eternal conflicts out of which life is made up is that between the efforts of every man to get the most that he can for his services, and that of society, disguised under the name of capital, to get his services for the least possible return. Combination on the one side is patent and powerful. Combination on the other is the necessary and desirable counterpart, if the battle is to be carried on in a fair and equal way."

It was to be another 40 years before the Congress of the United States would enact into law the philosophy of Holmes' dissent in the Vegelahn case.

Not only was Holmes prescient in labor law philosophy but also in economic analysis. Four years later he wrote a second dissent in Plant v. Woods (1900):

> "Although this is not the place for extended economic discussion and although the law may not always reach ultimate economic conceptions, I think it well to add that I cherish no illusions as to the meaning and effect of strikes. *** The annual product, subject to an infinitesimal deduction for the luxuries of the few, is directed to consumption by the multitude, and is consumed by the multitude always. Organization and strikes may get a larger share for the members of an organization, but, if they do, they get it at the expense of the less organized and less powerful portions of the laboring mass. They do not create something out of nothing."

Just now the American people are beginning to perceive what Holmes realized 60 years ago, that any unbalanced power in our society can do no more than rob Peter to pay Paul.

It is difficult for this generation to realize that for all of American history—but for little more than the past 25 years—the union was at best a second-class institution. Powerful, proud, sometimes arrogant, as unions are today, millions of Americans remember the time before the Norris-LaGuardia Act of 1932 when court injunctions frustrated most union organizing. The union-hated "yellow-dog contract", by which each employee agreed with his employer, as a condition of employment, not to join a union, was a stout barricade against growing unionism. The United States Supreme Court had held (1917) that it was illegal for a union to induce employees to break these yellow dog contracts.

CHANGING SENTIMENT

But the national sentiment was slowly turning. A sign came on May 7, 1930 when the United States

Senate refused confirmation of President Hoover's appointment of the eminently qualified Circuit Judge John J. Parker to the United States Supreme Court. Three years earlier Judge Parker had applied the Supreme Court's rule on yellow dog contracts so that organization of coal fields by United Mine Workers of America was impeded. The millions who remember those days lived to see yellow dog contracts outlawed under the Wagner Act and to see, just the other day, the retiring president of the miners' union, John L. Lewis, extolled in the press and on radio and television for 40 years of union achievement.

The improved standing and rapid expansion of unionism in the 1930's rested not so much upon right actions by unions as upon wrong actions by employers. The findings of the LaFollette Committee Reports (1937, 1939) make a record which employers would like to forget and workers do not forget. The Committee disclosed that 1,475 companies were clients of detective agencies during the years 1933-1936; these agencies provided "espionage, strike breaking" services; expenditures by 300 companies "on espionage, munitions, and strike breaking" amounted to nearly $9,500,000; spies were operating in practically every union in the country, 100 of them holding union office, one becoming a union treasurer so as to keep the company informed on union membership. Facts such as these—unspoken but unforgotten—condition labor-management relations today. But to predict the future this past must be remembered.

There is an even more distant past which lives in the minds of a few workers still living and many others who know first hand from those who were there. On July 6, 1892, two barges moved up the Monongahela loaded with Pinkerton agents. At the end of the bloody day 10 were dead, three agents and seven strikers, and 60 were wounded. Later 8,000 Pennsylvania Guardsmen came to keep the peace.

Then on November 21st Frick cabled Carnegie the news:

> "Strike officially called off yesterday. Our victory is now complete and most gratifying. Do not think we will ever have any serious labor trouble again."

"Ever" was too long, and Carnegie himself knew it. Nevertheless he replied to Frick from Rome:

> "Think I'm about ten years older. Europe has rung with Homestead, Homestead, until we are all sick of the name; but it is all over now. Ever your pard, A.C."

And yet Carnegie knew it was not over. In later life his writings show his ambivalence. One pamphlet brought a letter from Grover Cleveland, who defeated Harrison—some say because of the Homestead strike. Cleveland said to Carnegie: "You must capture and keep the heart of any *working man* before his hands will do their best." In the last decade of the nineteenth century, however, American management did not understand Grover Cleveland's prescient comment—William James was sowing the seeds for a deeper psychological knowledge at Harvard University, but the social sciences were not yet in flower. It was to be another two decades before the phrase "human relations" was generally employed. Indeed, as late as 1933 the picture of the coal mines and steel mills of western Pennsylvania and West Virginia was a melange of NRA, Roosevelt, Phil Murray, John L. Lewis, insurgent workers, tear gas, deputies, and some deaths. Such memories do not capture the workingman's heart.

During the recent nation-wide steel strike I was teaching a course on the American legal system. The treatment of the section on labor law was naturally heightened by the pending strike. There was little time in the course for history. I had not mentioned the Homestead strike. But a strong request from the class demanded the facts about that case—one which had occurred 50 years before most of my students were born. Community memories in highly industrialized areas such as western Pennsylvania are long.

Not all of the mistakes can be charged to management. There was more than a little union mania after the Wagner Act aligned government with labor. Union membership soared in the late 30's. Union leadership was not adequate in numbers or experience for its new administrative problems. To cap the confusion of the new era were added the internecine conflicts between the older craft-minded American Federation of Labor and the new industry-wide-minded Congress of Industrial Organizations. Hard on the heels of all these new-found powers and unwanted problems came World War II.

WARTIME EXPERIENCE

Despite remarkable administrative success in wage controls under the World War II War Labor Board, the public, deeply aware that national survival was at stake, did not regard frequent labor stoppages in basic industries with equanimity. War mothers with sons on the shelled beaches of Normandy and in the hot seas of the Asian front had little patience with jurisdictional strikes at home. Refinements of collective bargaining and labor-management relations which seemed of the greatest signifi-

cance to the new generation of labor statesmen left much of the general public unimpressed.

During World War II widening public support rallied to those forces which almost from the day the Wagner Act became law had sought its modification. The pendulum was ready to start a reverse swing. The Taft-Hartley Act (1947) was the result. This Act, while leaving the basic guarantees of unionism intact, effected one marked change in government's attitude toward unionism. The policy of affirmatively encouraging the spread of organization and collective bargaining was abandoned. The Wagner Act had impliedly assumed that all labor would, or should, unionize if employer restrictions could be but removed. The Taft-Hartley Act 12 years later left employers and unions free to compete for employee adherence. The Government instead of aiding unionism now stands in the centre.

The merger of the AFL-CIO into "honorable organic unity" did not end the troubles of labor or the concern of the American public. Six hundred million dollars of union dues each year presented too much temptation for some labor leaders. Two and a half years (1957-1959) of investigation and public hearings by the Committee on Improper Activities in the Labor or Management Field shocked and sobered the American people—including some top labor leaders themselves. Senator John L. McClellan's work as Chairman of that Committee will rank with the work of Senator LaFollette 20 years earlier.

Of course the shortest way to characterize the findings of the McClellan Committee is to summarize some of the Committee's charges against James R. Hoffa, President, subject to protracted court proceedings, of the Teamsters. He was charged with granting union charters to men with long criminal records, keeping jailed Teamster officials on the union payroll, manipulating hundreds of thousands of union dollars for his personal benefit, making millions more available to his friends without membership approval, profiting from conflict-of-interest business arrangements set up for him and his wife by employers dependent on the union's good will, using strong arm tactics to maintain and extend one-man rule, and conspiring with racketeers to defeat his own union's organizing efforts in the New York taxicab field.

The Committee also charged that Hoffa's announced intention to weld all transportation unions —land, sea, and air—into a single front would make him more powerful than the government itself. Much of the Senate testimony dealt with financial abuses in Local 299, of which Hoffa was president. According to the Committee, he arranged to transfer $500,000 of the Local's money to a Florida bank in connection with a loan by the bank to a real estate development project in which Hoffa and another held an option to buy a 45 per cent interest. The dreary recital of Committee charges of misappropriation of union funds and association with gangsters could be prolonged.

The American public observed with more than casual interest that despite such a record and despite expulsion from the AFL-CIO, nevertheless Hoffa's 1,600,000-member union adhered unquestioningly to his leadership. The American Congress having started with a project in 1935 to balance the power of labor with the power of management, found itself 25 years later with a problem of balancing corruption and gangsterism with righteousness and law.

Unionism has come to a plateau. No longer is it to be the darling of American Government. Unions will remain strong—long memories of the past will assure that. They will remain strong despite governmental neutrality and despite the ridding from their ranks of lawlessness and corruption which must come—under increasing governmental pressure if necessary.

But what of collective bargaining? The strike has been the accepted terminal point of that process. Labor experts have long agreed that the strike may sometimes be the necessary last step in the settlement of honest labor-management issues. Labor practitioners have been gratified that in recent years strikes by the big industrial unions have been largely free of violence, have been for the most part orderly tests of economic strength. Justice Holmes spoke for "combination" on the labor side "if the battle is to be carried on in a fair and equal way." And all the labor statesmen and philosophers had assumed that "the battle" could always end and so bring an issue to resolution and a new day for the enterprise.

THE STEEL SETTLEMENT

But the recent experience in Steel portends reexamination of the strike as an acceptable end of collective bargaining. Never was an issue clearer than the issue of inflation on which the steel companies and the United Steelworkers differed. True, during the dreary 116 days of bargaining with 90 per cent of the nation's steel plants closed, other issues arose. But the issue of inflation never ceased to be paramount. It was the issue which Justice Holmes had forecast sixty years ago: a wage increase in Steel would create no new wealth—"something out of nothing". Would the increase, if it came, be "at the expense of the less organized and less power-

ful portions of the laboring mass"? This was the issue. And the strike did not settle that issue. The Vice President of the United States acting without benefit of any existing labor-management legislation composed and compromised that issue. Government settled it.

The test of economic strength was not permitted to run its course. Not even the Taft-Hartley provisions for an employees' vote on the companies' last offer were permitted to operate. The American Government forestalled its own law, doubted its own faith in collective bargaining, suspended the law of the land for industrial peace.

The settlement imposed by Government in the steel industry is not a bad settlement. An historical (since 1940) rate of annual labor cost increase in Steel was cut by over 50 per cent; the settlement was 30 per cent less in per cent of increase than in the substantially concurrent aluminum, container, and copper settlements; the cost-of-living escalation in Steel and the newly-assumed health and welfare benefit costs are co-mingled so that increases in the latter will be a credit against the former—workers who read the fine print later may be disappointed in their failure to receive supposedly automatic cost-of-living increases. It is to be noted that at long last the Union accepted the industry's estimate of the costs of settlement—39-40 cents per hour over a 30 months' period. There is even some reason to hope that there may have been statesmanlike, albeit informal, assurances from the Union on the question of work rules and productivity.

What portends more labor law in America is the inconclusiveness of the recent test of strength between giant industry and giant unionism. No one knows how long either side could have held out economically or psychologically. An effort should be made in retrospect to measure theoretically what the countervailing forces were and which one would have probably prevailed. But the hard fact remains that while in America we preach collective bargaining, in this most recent case we practiced something else. Just what we practiced is not yet clear. But when government feels impelled to act beyond the pale of existing law, it is safe to predict that more law is in the making.

HIRING OLDER WORKERS

The Minister of Labour of Canada recently sent a letter to large employers asking their help in creating job opportunities for older (over 40) citizens. The Minister, The Honourable Michael Starr, prophesied that unless something were done the situation would get worse as the percentage of older workers rises.

Mr. Starr has a good argument. We all have a duty to do what we can to provide productive employment for our older and, even more so, our handicapped citizens. Outside of this, there is evidence indicating that older workers, in most occupations, are not less productive and in some cases are more productive than younger workers. Many of our older workers grew up at a time when they had to work hard to retain a worthwhile job and while this is still true, it has not been quite so apparent to some of our younger citizens who have received all their job experience in the post-war inflationary boom.

Curiously enough, the Federal Government *itself* is responsible for two rather silly bits of legislation which, among other things, tend to discourage employers from hiring older workers and thereby raising the average age of their employee group. The Government imposes an arbitrary limit on the amount of pension contributions which the employer may claim as an expense. If the employer hires older workers and increases the average age of his employees, the amount which he is not allowed to claim as an expense is increased.

Secondly, this year the present Government passed legislation, effective in 1960, whereby senior executives, covered for more than $25,000 of group life insurance, must pay a special tax on their employer's premium. The higher the average age of the employee group, the greater is the tax these executives must pay. In other words, the very executives who are in a position to change their companies' policies in the direction of hiring older workers would, beginning next year, suffer a tax penalty for doing so.

Of course, the real problem goes much deeper than these two silly bits of legislation. Productive jobs for our older and handicapped citizens, as well as for many others, can only arise in a healthy, optimistic economy—an economy with a gleam in its eye. Such an economy can only exist so long as the people who can bring it about believe they will be rewarded for their efforts. Rightly or wrongly, many of our potential jobmakers believe that any rewards from extra effort they might make are threatened by the egalitarian philosophy which seems to be an important motivating force of our government.

—*Canadian Actuarial Bulletin,*

William M. Mercer Limited,

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What Management Should Know About

INTEREST RATES

The author, senior economist at one of the country's leading banks, attempts to highlight the key elements in the often-confusing controversy surrounding interest rates, monetary and fiscal policy. Better understanding of this significant question is clearly a prerequisite to intelligent financial planning.

A. N. McLeod

It is not the purpose of this paper to expound the mysteries of portfolio management, nor the calculus of investment finance, important as these subjects are to the businessman, investor and investment counsellor. Rather, the purpose is to bring out some of the fundamental facts about interest rates in theory and practice in a way that it is hoped will be useful in making wise investment decisions. Nevertheless, for the sake of perspective it seems wise to begin by a brief excursion into these two specialized fields, as years of relatively low and stable interest rates appear to have dulled public understanding of them.

The individual portfolio of every investor ought to be designed to meet his own particular requirements, whether he is a small saver, a wealthy individual, or a great corporation. Savings deposits and other savings contracts that can be redeemed at par with no more serious penalty than some sacrifice of interest earnings are best for certain purposes. Bonds, which normally yield a higher interest return but may fluctuate sharply in price from time to time, are appropriate for other purposes. In between come such things as Treasury Bills, which may be very attractive at times to some investors, but which are not readily available to the small saver. Then, usually even more subject to price fluctuations than bonds, there are various types of equity. In distributing his investments among these various outlets, the individual investor will have to balance out his own particular requirements or desires for liquidity, income, protection against capital loss, hope for capital appreciation, and so on—and, a very important matter nowadays, he must make an assessment of the inflationary or deflationary prospects.

Unfortunately there is often a good deal of confusion among the general public with respect to the differences between bonds and stocks. Even where the distinction appears to be clearly understood, there may be some confusion in judging their market behaviour. For example, the public seems to understand well enough that the price of a stock reflects the market's judgment of the 'quality' of the issuer in some sense, and his future prospects. But this same idea is often carried over and applied to bonds, where of course it is normally quite inappropriate. Unless the issuer's position is so seriously impaired as to threaten bankruptcy or default, it is not any change in his reliability or his prospects that produces a change in the prices of his fixed-interest-bearing obligations, but rather a change in the general level of interest rates. There is a quite mechanical relationship that links the price of a bond, its coupon rate, its term-to-run, its yield, and the current level of interest rates for newly-granted loans of like term and character.

The principle of this relationship may be illustrated by supposing that 10 years ago a certain corporation, a first-class risk, sold a 20-year bond issue carrying a 4% coupon—and let us say it was then sold at par, for a yield-to-maturity of 4.00% for the purchaser, though in fact this has no direct bearing on our immediate problem. Suppose that the borrower is still a first-class risk and wants to float a new issue now, but finds that today he must offer a 6% coupon at par for 10-year money. It follows that the old bonds must now be worth only $85.12, which is the sum that will give a buyer a net yield-to-maturity of 6.00%; for they now have 10 years to run, just like the new bonds, and no new investor

would buy them from their present holders except at as good a yield as he could get by purchasing the new issue.

In practice of course, other factors might modify the market's evaluation of the old bonds in our example. In particular, most investors would have to pay income tax on their interest income, and in a typical case the tax would be based on the coupon rate, not the actual yield. Thus the market value of the old bonds would undoubtedly be somewhat above $85.12, because at that price the net-of-tax return to a typical investor would be greater than on the new bonds. Other considerations would also enter, such as expectations of future movements of interest rates, which might affect the two issues differently. When we move on to comparisons between bonds of different terms or offered by different issuers, still other complications arise. Various market differentials naturally appear which reflect the status and reliability of the issuer and other considerations having to do with the risk element inherent in each particular issue. Nevertheless these differentials do not alter the basic principle that bond prices are an inverse function of interest rates.

To simplify the discussion it is common to talk in terms of the market for Federal Government bonds, where the risk element is virtually absent, and this practice will be followed here. Most of the discussion will apply to the structure of interest rates as a whole, not the differentials between one particular interest rate or group of interest rates and others, such as the relationship of short rates to long, or corporate bond yields to government yields, or bond yields to mortgage rates; in the exceptional cases where these differentials do enter, that fact will be made plain. Even with these simplifications the task is sufficiently complicated, because of the role we now expect governments to play in our economy, so we will be led into consideration of monetary and fiscal policies and other aspects of economic theory.

SOME INTEREST RATE THEORY

Interest rate theory and its integration into general economic theory has always posed serious difficulties, and to some extent it still does, so it can not be pretended that all economists would give the same explanation as that presented below. At the very least there would be important differences in emphasis. However, these differences should not affect our understanding of the subject at the level of generality that will concern us here.

Let us begin therefore by reference to the ideas of a Swedish economist, Gustav Cassel, who described interest as the price of "capital-disposal"—i.e. the price you must pay to have the use of a given amount of capital for a given period of time.[1] This is a very useful approach, whether we think of capital in the sense of actual physical objects such as buildings, machinery, inventories, etc., or securities denoting ownership of physical capital, or a sum of money available for investment, or what. It helps us to understand that interest rates, like other prices, must respond to supply and demand. When demand for investment funds is weak in relation to the available flow of savings, interest rates are likely to be low. When investment demand is strong relative to saving, interest rates are likely to be high.

Of course there may be both long-run and short-run shifts in the level of investment demand relative to current saving. For example there may be a general trend that persists over a period of years, and cyclical fluctuations around that trend. Thus at one time you may have a long period in which even the highest interest rates at the peak of each cycle are relatively low, and at another time a long period in which even the lowest interest rates at the trough of each cycle are relatively high. Furthermore the change in the underlying trend between these two periods may be either gradual or abrupt, according to circumstances.

Still other influences on interest rates can be readily identified. For one thing it is clear that psychological factors play a large part, just as they do in any other market; and this thought brings us to the concept of "liquidity preference", for which we can thank the late Lord Keynes.[2] At the risk of dangerously over-simplifying this concept I shall try to compress it into three brief propositions and two examples:

Proposition 1: In a given situation the public can usually be induced to shift its holdings into less liquid assets (e.g., from cash into bonds or from short-dated bonds into longer-dated bonds) by offering a sufficiently high differential rate of interest on the less liquid assets compared to the more liquid.[3]
Proposition 2: The public's desire to be liquid (its liquidity preference) bears no necessary relationship to the state of the business cycle or to any objective criterion, but on the contrary is largely subjective

[1]Gustav Cassel, *The Theory of Social Economy* (new and revised edition translated by S. L. Barron; Harcourt, Brace: New York, 1932), pp. 197-207.

[2]John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (MacMillan: London, 1936), chap. 13.

[3]Note that we are here talking primarily about differentials within the structure of interest rates, and not about changes in the level of the general interest rate structure. However, to the extent that we are talking of shifts from non-interest-bearing assets ('cash') to interest-bearing assets ('bonds'), the distinction becomes blurred.

and psychological; consequently it may change suddenly and unpredictably.

Proposition 3: If the public's liquidity preference falls when there is no significant change in economic conditions, lower interest differentials will be sufficient to maintain a given distribution of holdings among less-liquid and more-liquid assets, or the same rate structure will induce a shift to less-liquid holdings; if it rises, the contrary will be true.

Example 1: In the U.S.A. prior to the Treasury-Federal Reserve System accord in 1951, the pegged level of bond yields gradually became insufficient to induce the public to hold bonds, because of changing economic conditions, and the F.R.S. was forced to expand the money supply (that is, to add to the public's liquidity) in order to maintain the pegged level of bond prices; afterwards the money supply could be stabilized by allowing bond yields to rise (prices to fall) until the public was no longer a net seller. Similar events occurred in Canada and other countries at about the same time.

Example 2: In Canada in 1958 the public's willingness to hold bonds at then-current yields suddenly declined. By offering higher rates, the Conversion Loan induced the public not only to resume the net absorption of bonds but also to shift into longer maturities.

Undoubtedly one of the most important of the psychological factors affecting liquidity preference today is the widespread anticipation that costs and prices will continue to creep upward in the years to come, or in other words that the dollar will continue to lose value slowly but more or less steadily. Today we have a lenders' market, which in itself means a tendency to relatively high interest rates. When you add the expectation of continuing creeping inflation to such a situation you can be sure it will raise rates still higher, for who would willingly lend unless at a total return adequate to compensate him for the expected wasting of his capital, in addition to the going rate of interest in terms of dollars of constant purchasing power? Indeed, it is highly doubtful that this factor has had its full effect on interest rates even yet, for so far it seems to be only a rather small part of the general public that has sensed what is involved. If fears of creeping inflation are renewed or intensified, and if its full implications become generally appreciated, the "inflation premium" that undoubtedly exists in today's interest rates may rise substantially. Expectations of a quite modest average rate of price increase in the future could easily add as much as two percentage points to the already high rates a lenders' market has brought; an abrupt change of this magnitude would put a very severe strain on our financial markets. Once the seriousness of these and other implications of creeping inflation become more widely recognized, surely our society will prove vigorous enough to muster both the wit and the will to solve the basic problems involved.

Another psychological factor is the fear of government deficits as such. To the extent that this fear is rational, however, it is largely related to the fear of inflation. Nowadays it is pretty widely recognized that a government deficit in times when business activity is depressed may have a highly desirable function in stabilizing the economy and preventing cumulative deflation. It is only when deficits are inappropriate or excessive that they are dangerous, and in that case the main danger is that they will feed inflation.

EFFECTS OF MONETARY AND FISCAL POLICIES ON INTEREST RATES

Monetary policy may be defined as the use of central banking techniques to influence the general level of business activity. In a broad sense it has been known and used from the first beginnings of central banking, but its objectives and philosophy have been dramatically altered by the rapid acceptance of ideas related to or stemming from Keynes's *General Theory*, published in 1936.[4] Nowadays it is expected (among other things) to help in maintaining a balance between private investment demands and the currently available flow of savings, thereby offsetting the inflationary or deflationary forces that would be released if a tendency to imbalance were allowed to develop.

Mechanically speaking, monetary policy operates primarily on the volume of money and on the amount of bank lending. Its real impact, however, is on the total liquidity of the economy, including the public's willingness to hold various other financial assets besides money, and hence on non-bank as well as bank lending; its ability to influence business decisions must be understood in this light. Among other things this clearly means that monetary policy must have a significant influence on interest rates, though there is some difference of opinion whether its interest-rate effects are of crucial importance to its success, or merely incidental side effects, or something in between. In general, monetary policy reinforces and systematizes the natural forces that tend to produce cyclical swings in interest rates; it will normally promote low interest rates during a recession in order to stimulate new invest-

4J. M. Keynes, *op. cit.*

ment, and stiffen interest rates sooner than otherwise might occur if a boom threatens to get out of hand. On the other hand monetary policy may be used to offset rather than reinforce normal market forces if it appears to the authorities that the market is acting inappropriately.

The essence of fiscal policy is the deliberate creation of an over-all deficit or surplus in the government budget as a device for regulating the pace of business activity. It came into favour in the 1930's, partly as a result of the ideas already mentioned centering around Keynes's writings. It may be said to have originated as an aid to monetary policy in regulating the level of business activity, for easy money and low interest rates alone had proven inadequate to stimulate recovery. For a while however it seemed to have completely swallowed up monetary policy, which had fallen into disfavour because of its apparent ineffectiveness in the 1930's. Lately monetary policy has staged a more or less worldwide revival, but probably we have yet to see the optimum use of the two techniques working as a team rather than as alternatives.

Superficially, fiscal policy seems to have no direct implications for interest rates. Indeed it has been widely argued that reliance on fiscal policy makes an "easy money" policy all the more necessary in order that the government deficit may be readily financed. However, it would appear that these widely accepted views are patently wrong, and that fiscal policy does have obvious and important implications for interest rates. The general failure to recognize these implications may be attributed to the factors, touched on below, which have brought about the continuation of relatively easy money policies throughout the post-war period until comparatively recently.

Fiscal policy decisions and monetary policy decisions, separately or in combination, ought to be framed so as to maintain a balance between private investment demands and the currently available flow of savings. But, whereas monetary policy operates primarily by influencing private investment and saving decisions, fiscal policy operates by using a budgetary deficit in substitution for private investment, or a budgetary surplus as a supplement to private saving. Reliance on fiscal policy as an economic stabilizer thus requires that any fluctuation in private demand for investible funds be substantially if not wholly offset by an opposite fluctuation in the government's demand for borrowed money, and hence implies that the cyclical fluctuations that would otherwise occur in interest rates will be damped down or even completely eliminated.

With these considerations in mind, we should expect the natural cyclical movement of interest rates to be accentuated if monetary policy alone were used to regulate economic activity, and to be damped down or smoothed out entirely if fiscal policy alone were used. In practice the two techniques are usually employed in combination—perhaps with some shift of emphasis from one to the other in different phases of the cycle—so that a distinct cyclical movement of interest rates is normally discernible.

APPLICATION TO THE POST-WAR ERA

This line of thought offers some useful clues to the financial history of the post-war era. A relatively low level of interest rates became established 25 years or so ago, when it was entirely appropriate, for that was a period of chronic depression and underemployment; business was not very good even in the best years. Pretty much the same rate structure was maintained throughout the war, and quite properly so, for the normal price mechanism does not altogether fit in with the universal sacrifices that a major war entails. It can also be argued that it was quite appropriate to continue these relatively low rates into the post-war period, as long as we were afraid of relapsing into chronic depression. But low interest rates are not appropriate to an era of peace, prosperity, and heavy capital investment. If we could only have foreseen the period of general growth and expansion that has now continued with only brief interruptions for nearly 15 years and shows no sign of ending, then we should have started at once to allow our interest rate structure to move to a higher level. By so doing we would have avoided the building up of excessive liquidity and put greater restraint on inflationary forces.

Only in the last three or four years have we begun to adjust our thinking to what may be called a period of chronic prosperity, a period in which even the worst years have not been too bad—in no post-war year did Canada's Gross National Product fall significantly below the previous year, which means that any time it failed to establish a new all-time high it was running a close second. At last, market forces are being allowed to have their proper effect on interest rates. A long-overdue upward adjustment has been taking place, a new range of cyclical interest rate fluctuations has been in the process of etablishment.

Unfortunately, however, our adjustment to this new range was not permitted to be as smooth as we might have hoped. By the fall of 1957 it had become apparent that the crest of the boom was passed, and bond prices soon began to rise rapidly—that is to say, yields fell sharply. Six months later the process

reversed itself, and by now the peak yields of 1957 have been far overshadowed.

Why this violent movement and violent reversal, which whipsawed the bond market unmercifully?

Well, in the light of what has already been said we might reasonably conclude that the real problem is not to explain the 1958 break in the bond market, but rather to explain the upsurge of late 1957. The Government's budgetary plans were well enough known by that time so that the general magnitude of its heavy borrowing needs in the coming months was obvious. Why then the vigorous rise in bond prices? Was it a gross mis-reading of the facts of the market? Did everyone suppose that the onset of recession meant interest rates would be free to return to a "normal" 3% again, after a brief period of "abnormal" and "distorted" rates that had not been heard of since prehistoric times and were anachronistic in this enlightened age? Or is there some other explanation?

UNSTABILIZING INSTITUTIONAL FACTORS

However, there are still other influences that affect interest rates in general and bond yields in particular. The whipsawing that the bond market has recently been through brings out dramatically the unstabilizing effects (in the short-run at least) of certain institutional factors.

It is pretty generally realized that the banks are virtually bound to trade on the wrong side of the bond market at all times. They must buy in easy money periods when credit demand is low and bond prices high, and they must sell when money is scarce and bond prices low. This is part of the normal operation of monetary policy, the banks recognize and accept it, and its effects are already included in the preceding analysis. But there are other institutional factors over and above this which have serious destabilizing implications. Perhaps they can best be explained by quoting from the submission by the Canadian Bankers' Association to the Senate Finance Committee on 16th June, 1959 with respect to the threat of inflation:

> "A further factor contributing to interest rate changes has been the growing awareness among businessmen and investors of the basic monetary changes that may be expected during the course of a business cycle. Expectation has been added to response as an important element in the bond market and also in the demand for bank loans. This factor of expectation, or anticipation, has tended to hasten and accentuate changes that might otherwise be expected to occur in a more gradual and orderly way. For example, when borrowers anticipate greater difficulty in satisfying their financial requirements they accelerate their borrowing, thus tending to force the banks to sell securities in larger amounts than might otherwise be necessary. Also, other large holders of securities contribute to a weakening of the bond market and to a rise in market interest rates by selling in anticipation of a continuing fall in security prices. Both these forms of anticipatory action tend, if anything, to exaggerate or intensify the swings in market rates of interest and in the demand for credit."

In current economic literature there is much discussion of what go by the rather awkward name of "non-bank financial intermediaries", and of their growth in importance during the 20th century.[5] These are in substance the "other large holders of securities" referred to in the passage just quoted. Among other things there is considerable debate about whether their credit-granting activities do or do not reduce the effectiveness of monetary policy.[6] There is a clear relationship between this debate, on the one hand, and the destabilizing influences on the bond market noted in the C.B.A. submission on the other hand. Unfortunately it is not possible to do more than point out the relationship here, for this is a large subject in its own right.

However, we may carry this thought a little farther still in a different direction. Perhaps we now have far too much liquidity in our financial system, and not, as some people are inclined to argue, too little—meaning too much liquidity in the hands of the general public, not just in the hands of the banks and other financial institutions.

Let us take 1913 as a base for comparison. By then we had developed most of the financial institutions we now have, and the Rowell-Sirois report gives us some data on the volume of government debt outstanding at the end of that year. Estimates, admittedly rough, have been made by the Department of Economic Research of The Toronto-Dominion Bank for other liquid assets. The money supply was $1.2 billion, and that was the main form

[5]See for example J. G. Gurley and E. S. Shaw, "Financial Aspects of Economic Development", *American Economic Review*, Vol. XLV, No. 4, Sept. 1955, pp. 515-538; "Financial Intermediaries and the Savings-Investment Process", *The Journal of Finance*, Vol. XI, No. 2, May 1956, pp. 257-276; and "The Growth of Debt and Money in the United States, 1800-1950", *The Review of Economics and Statistics*, Vol. 39, No. 3, Aug. 1957, pp. 250-262. (These papers are also available as Brookings Institution Reprints, Nos. 8, 13, and 18.) See also "Are Our Monetary Controls Outmoded?", an address by S. Clark Beise, President, Bank of America, before The Economic Club of New York on November 19, 1956; and Richard S. Thorn, "Non-Bank Financial Intermediaries, Credit Expansion, and Monetary Policy", *I.M.F. Staff Papers*, Vol. VI, No. 3.

[6]For example, see A. N. McLeod, "The Mysteries of Credit Creation", *The Canadian Banker*, Vol. 66, No. 3, Winter 1959, pp. 20-28.

in which financial assets could be held. Deposits at competing savings institutions were small. The combined debts of governments (Federal, Provincial and Municipal) and corporations were about double the money supply, but most was held abroad—probably not over one-third was held in Canada. The value of all outstanding corporate stocks was perhaps $1.5 billion, of which railways accounted for about one-half, but one may question that as much as two-thirds of it was held in Canada. So that gives us a total of some $3 billion in liquid assets—$1.2 billion, or 40% in money, $0.8 billion in bonds, and $1 billion in stocks.

The latest date for which we have reasonably complete figures is the end of 1957. The money supply amounted to $13 billion. Deposits at other savings institutions were almost another $2 billion, and government debt held in Canada (excluding that held by banks) was over $13 billion. Total corporate bond issues outstanding amounted to about $6 billion, and the value of stocks listed on the Toronto Stock Exchange was something over $40 billion; we may estimate that about $10 billion of these issues was held abroad. That gives us total liquid assets of something approaching $65 billion held in Canada, of which the money supply accounted for only 20% or so.

Indeed the contrast is even greater, for our bonds and stocks today have a much broader market and are thus much more liquid, and much of our government debt is in Canada Savings Bonds (payable on demand) and short-dated Treasury Bills. Organized stock markets handle a huge turnover every year, and over-the-counter trading in bonds is both active and highly competitive. For the individual this is a fine thing, since he can readily sell his holdings if he needs money, but are there not some serious disadvantages for the community as a whole? It has surely helped to emphasize short-term trading and capital appreciation at the expense of long-term investment for income. Even insurance companies and pension funds, which one might surely expect would want to average out their returns over longer and longer periods as the average human lifespan increases, seem unduly concerned with short-term trading advantages. The result is to put the bond market under additional strain as these institutional operators try to guess the turning points so they can sell near the top and buy near the bottom.

So far the stock market has not seriously suffered in the same way. Here it is commonly argued that the growing investment trusts and other professional investing institutions are a stabilizing factor. Yet the picture might be significantly changed if the upward trend in the general price level that has persisted for several years were to be weakened or slowed down. Once creeping inflation is conquered —as it surely must be conquered before long—may not institutional destabilizing developments operate in the stock market also?

If this tendency in the bond market is allowed to grow, and if it is allowed to spread to other markets, will it not make monetary policy well nigh impossible? Successful monetary policy is heavily dependent on open-market operations; this is especially true when monetary restraint becomes necessary after a prolonged period of easy money, because the excess liquidity of the general public (and not just that of the banks) must be eliminated in some way. Extensive open-market operations by the monetary authorities at such times put severe enough strain on the bond market; if this strain is increased by the trading practices of other financial institutions it may conceivably break the market entirely. Yet there are some, perhaps many, who want to see the principle of liquidity extended even farther, for example by establishing a so-called secondary market for N.H.A. mortgages.[7] Might this not in the end mean that the Bank of Canada would have to support the entire mortgage market, indirectly if not directly, as well as the government bond market?

So, to repeat, perhaps we already have too much liquidity in our financial system. The underlying facts of economic life involve us in heavy long-term capital commitments; if we get too ingenious at divorcing our financial instruments from these basic realities we may find that we have simply outsmarted ourselves. Liquidity so achieved may prove a dangerous delusion.

CONCLUSIONS

The line of argument put forward here has more implications for the businessman and investor than can be adequately summarized in a few paragraphs. However, a few of the major points may be spelled out.

First of all, we gain some perspective on the vexed question of monetary restraint in boom times. *Provided* we can succeed in keeping all our human and other resources reasonably fully employed, money becomes simply the counterpart of capital and income in terms of "real" goods and services, just as the classical economists used to describe it. Subject to this important proviso, then, money capital must become scarce as real capital becomes scarce; the consequence will be a rise in the price of the use of

[7]Some of the implications of this subject are explored in greater detail in "The Role of a Secondary Mortgage Market", by Sidney A. Shepherd, *The Business Quarterly*, Vol. XXIV, No. 3, Fall, 1959.

money, that is a rise in interest. Increasing the money supply would not make any more physical capital available, and it could not keep interest rates down for long; instead it would simply feed inflation.

Secondly, there is a real need for disabusing the public of a great many misconceptions that have accumulated in the last 25 or 30 years. The expectation that interest rates will probably fluctuate more or less widely, and the reasons why, must be brought home to the investor. The implications of these fluctuations for bond prices must also be made clear; incredible as it may seem after the rude and expensive education provided by the bond market in the last three or four years, apparently some people are still buying long bonds today without a proper understanding of what may happen to their prices between now and maturity. Misplaced belief in "liquidity by transferability", the myth that any bond is as good as cash, dies hard.

Thirdly, the investor needs guidance in arranging a balanced portfolio. This is not the place to discuss investment in equities, but the implications for investment in fixed-interest-bearing securities are obvious. Where the funds are intended as a reserve for contingencies of uncertain timing (and surely at least some part of any portfolio must be so considered), a savings deposit or Canada Savings Bonds or the like offers the obvious vehicle. Provision for eventualities where the timing can be accurately estimated may be either in these same forms or in issues maturing at or close to the date in question. And so on—more precise details may safely be left to professional investment advisers.

Finally, one last warning. We have fresh in our minds the mistakes of the past, when easy money became an article of faith and was carried over into a period in which it was no longer appropriate. Let us not similarly fall into the easy belief that boom times and high interest rates are now the new normal and will continue forever. The time will almost certainly come again some day when easy money will once more be appropriate. It need not be a time of deep depression like the 1930's, for we surely know enough now to prevent such a catastrophe even though we cannot yet control the business cycle completely; it may come simply as the result of a gradual lessening of the pressure for capital expansion, or improved techniques for balancing investment demand and the community's flow of savings. But sooner or later easy money is likely to return.

TAXES AND CAPITAL SUPPLY

Excessive tax rates have a good deal to do with the shortages of capital everyone is concerned with these days. Most affected is the supply of "venture" capital which is so important for new enterprises and new techniques of production. The small businessman finds that the tax collector siphons off money he needs to expand his business. People with good incomes before taxes find themselves unable to accumulate capital for financial independence. A steep progression of rates frustrates the normal working of compound interest in building savings.

The failure of individual pools of capital to build makes it difficult for small business to find financial backing. It creates problems for schools, colleges, and cultural bodies in raising money. The upshot is that government loans and subsidies are demanded, even though these perpetuate the tax rates which gave rise to the trouble in the first place.

It is rather generally thought that high income taxes stimulate giving because gifts to qualified educational and philanthropic institutions are deductible on the tax forms. If this were the whole story the universities, for example, should have a superabundance of money. Instead, we hear a university president say "we can no longer ask whether federal funds should go to private institutions, but rather how they should go". Deductibility is the stated reason for many gifts when really it is only a permissive factor. Steeply progressive personal income taxation arrests accumulation of major benefactions such as those which gave our independent colleges their very existence.

—First National City Bank
Monthly Letter,
January, 1960.

Developing Managers on the Job

A most significant element in any program of management development is on-the-job training. Professor Thompson here turns his attention to the various factors that make for success or failure in training potential managers on the job.

WALTER A. THOMPSON

Actual work experience has long been the most respected facet of any management development program. Many companies now have elaborate programs to make sure that the right experience is thrown in the way of men with potential management skills. Arranging to have the most useable experience for specific men who are headed for management responsibilities is not easy. The man himself is in a pretty helpless situation; the major responsibility and ability to make this possible rests clearly with senior management. Not only is the employee himself in no position, at least in the early part of his career, to know what type of experience will be developmental, but the patterns that are possible in a large company are often complex. The fitting of the jigsaw puzzle must be done with considerable thought and work. Too often much of the experience that is actually made available to the man is the result of something other than careful planning. Fuller realization is needed that this tool of on-the-job training for management has not been well and sufficiently used.

This paper is based on the author's attempt to find out what is really happening in this area. The cooperation of the class members of the 1958 and 1959 sessions of the Management Training Course at the University of Western Ontario has made the paper possible. This group of Canadian business executives is in an excellent position to help in the preparation of such a report. In the main, they are men who are currently operating at significant managerial positions. Their average age is 42, and they are typically the senior men in their functional areas (such as finance, marketing, etc.). Some general managers, and a couple of corporation presidents are also in the group. The various industries and geographical areas are well represented, in addition to military and government administrative personnel. They are not "average-run" administrators; in the main, they come from companies or organizations where the development of management talent is serious business for top management.

For purposes of gathering information, the men were brought together for a group discussion, which was recorded, on the subject "good bosses". The men were also asked to report in writing on some phases of their own development in their companies.

The actual questions put to them were:

1. Could you give me a brief outline of the jobs held (and the time in each job) leading up to your present position?
2. Actual job experience is a most important phase of management development:
   a. What part of your experience do you believe is most useful to you? In what way has it been helpful?
   b. Is there any experience that you would like to have had?
3. a. Looking back on your experience, has a particular boss affected your present management ability? What were the qualities that made him a good boss? In what way did he help you?
   b. Have you had a boss who either gave little or hurt your development of administrative skills? In what way?

This article is based on a careful examination of 50 letters on this subject, and the taped discussion session.

TRAINING IN TECHNICAL SKILLS

The replies to this question did not make a neat pattern, but the whole picture, as revealed by an analysis of all the reactions to this query, is somewhat helpful. The executive clearly wants to be skilled in all the techniques involved in the operation of his part of the operation. If he is a treasurer or controller he feels he wants to have highly-developed skills in accounting; if he is plant manager, he wants all the tools of production. The appreciation of experience leading to higher skills of this specialized type was expressed twice as often as any other experience. Here is the way some of the managers expressed themselves on what experience they found most useful:

> "Administrator (of research group) should have enough ability in research to command respect".
>
> "Working at worker level in the factory—appreciate their problems—know what they are talking about".

This respect for technical knowledge in a specialized area manifested itself many times later in this study when the "best bosses" were described, along with the helpful effects on their development. It also runs through other replies, when the individuals were talking about the value of special assignments, specific staff jobs, and other developmental situations. Over 100 years ago, John Stuart Mill, pondering the problem of training for administration in civil service, said that before you qualify as an administrator, you have to master your craft as an engineer, accountant, salesman, and so on. An administrator with responsibility for a functional department or division certainly wants to be respected for being on top of the technique of his area. This clearly rates high on his scale of values.

SEEING THE WHOLE OPERATION

Work which led to a comprehension of "whole picture" of a corporation was well up in the balloting. The jobs that gave this knowledge were, of course, varied. The effectiveness of being attached to a smaller operating unit in developing this broader view of "what it is all about" was said in several ways:

> "Helped me to get my feet on the ground—also to know a good day's work."
>
> "Practical operation and selling experience you can get in a smaller operation such as a branch."
>
> "That of local operation—because of contact with people — which is the best way to gain knowledge."
>
> "Experience in Western Canada—was on my own with a large territory—also knocked some of the 'Eastern' attitude out of me."

The men who had a chance to work as an "assistant-to" felt this kind of experience was very valuable in their conceptual thinking, and came through with such replies as:

> "As an administrative assistant — led to understanding of staff function — coordination of departmental heads — as staff, got to work in many areas — got knowledge of the industry".
>
> "Now able to look at main ingredient of an important phase of our business—assist them in achieving ultimate purpose of the business—supplying quality goods at maximum profit".
>
> "First exposure to higher level management thinking—opportunity to see business as a whole."

The opportunity to move geographically with different work situations, providing a broader picture of one company was mentioned. This look at the whole picture was certainly a much-appreciated experience.

SALES EXPERIENCE

The usefulness of sales experience as a broadening device came in for approval, too; the early contact with key customers was particularly valued by one man. An "assistant-to" cited his sales experience as being particularly valuable in learning to appreciate people. A senior manager expressed much the same thought this way:

> "My exposure to customers during the earlier portion of my time was significant and helpful. Because of the nature of the work I had to learn to listen carefully. It was necessary for me to ask questions to clarify my understanding in a tactful and pleasant way. As the atmosphere was frequently 'hot' in these cases, I believe that I acquired a degree of skill in dealing with people under pressure."

Selling experience can be sobering, and can contribute to the knowledge of the main goals of the business.

The special assignment and starting a new project pretty much from scratch was given high rating in development by a solid group of men. One man dealt in this phase of his experience at some length:

> "My first break was to be assigned to a special course—the technical area which I became educated in was, a few years later, a revolutionary and significantly new product area of our com-

pany's operation. I acted as secretary of a committee controlling the introduction. This exposed me to middle management levels and their policy discussions, and also led me to many avenues in areas remote from my original functional specialty."

STAFF ASSIGNMENTS

Closely allied to the "special assignment" type of training are the values the line men got from early staff assignments. These were expressed:

"My staff assignment opened my eyes to the care and consideration involved in imposing new ideas on operating departments. I learned about the social significance of changing the status quo."

A senior marketing man reported:

"Greatest maturer was personnel work—got an insight into the personalities that make up the company—bit more tactful—and to look carefully at all sides of the problem."

Another reported:

"A staff job which required the writing of instructions made me realize how inadequate words are."

Another:

"A staff job where I *had* to get cooperation to get a job done, helped me."

MILITARY EXPERIENCE

The war caused many of our present management people to spend years in military activities. The value of this experience as a background for administrative skills has been played down by many. Nevertheless, a substantial group in our sample were pretty emphatic in their belief that this was a useful activity as a prelude to their present management responsibilities. Here is the way some talked about it:

"Training and action as pilot in RCAF taught me to search for faults in myself—and how to operate in such a way to correct these faults—how to tackle a problem so as to master it as quickly as I could—mastering meant almost 100 per cent of the time."

"Army—orientation in large organization—relation of parts to the whole and purpose of the whole—need to make fairly large decisions on my own—the social side gave a Prairie boy confidence."

"The RCAF. Prior to the war, I had accumulated a reasonable technical and mechanical knowledge. This was furthered during the early years of the war. However, the handling and directing of a reasonable number of people, and the coordinating involved seems to me to have helped me in later years."

The value of working under good bosses is to be tackled in detail later on. A number of men felt assignments throwing them into contact with good people was important enough to single out this phase of experience. Similarly, experience on jobs that represented a real challenge and high interest to the individual was particularly attractive to men wanting to move up in management responsibility. However, one man did say that his least useful experience was one that was too much of a challenge—it was over his head and he fumbled because he simply was not ready. Most, though, are anxious and value early challenge. Here are some of the replies that reported this as their most useful experience:

"One challenges ability and resourcefulness. I had the responsibility of getting the job done—not told how to do it—and was judged only by the results. There was no way of passing the buck by asking your boss to help."

"Thrown into a tough job—militant union—need to control costs—need to make numerous technological changes—gave me to realize that through hard work and plenty of thought I could generally solve them."

"Operating as an assistant-to, I felt that I was operating at maximum capacity almost all of the time. I never reached a point when I felt myself comfortable in the work to be performed. As soon as I approached that level, new responsibilities and more difficult assignments were given to me. I gained confidence in committee work, negotiating of contracts, and became appreciative of the need for thorough study of problem, searching analysis and absolute mastery of figures, and great emphasis on clear and sound reasoning for all suggestions and recommendations."

EXPERIENCE — WANTED AND UNWANTED

It was no great surprise that a very large proportion of these replying would like to have had—but did not get—some particular experience before reaching their present position. On the other hand, it was most interesting to note that every person was very sure all of his past experience had been useful. However, some did point out that some of their experience had negative effects or at least did not have the result that was intended. The poorer job that had to be endured at least taught patience. One man said that a job in a dirty and exhausting automobile machine shop "drove me into the university,

which was a step on the way to my present management job". A large number felt they were held at routine jobs too long in the early part of their careers. On the other hand, there was some observation that the rotation of jobs was too fast and the knowledge gained too superficial. In this connection, it may be noted that the Air Force is in the process of lengthening the time spent on particular jobs in its rotation of men. The high cost of low productive effort during the man's early months on a new assignment will thus be spread over a longer period of usefulness as the man stays longer on individual assignments.

What this all boils down to is that experience is such a highly-valued article that most management men can think of kinds they would like to have had and regret practically none of what they have had.

A generally-wanted experience is in the field of figures in all areas of management. Even some of the "figure" people would like to have had a broader and greater knowledge in depth in their field. Both production and marketing executives feel a lack in this area. The "need to plan and defend large expenditures of money to senior people" pointed up this deficiency for an engineer in charge of constructions costing many millions. Many figure people would like to dip into knowledge in other functional areas. Sales people were more vigorous than others in their desire to have experience in other areas. These senior sales people also felt that their experience would have been better if they had had more experience in particular sales areas, not just in selling. Among the types of training desired were sales training, technical sales, more planning and promotion experience, more actual sales supervision. Many men in the general management field would have liked to have had the chance to have crossed functional areas—to switch from sales to finance or production. One general management man would have liked to have been put in position where he would have "realized any strengths and weaknesses at an earlier date". A desire to know more about "people" was an underlying reason for a widely-expressed desire for greater breadth and depth of experience. The senior management man who has spent little time in the line feels his experience is deficient. The sales manager regrets little actual selling experience. Some feel that experience in "training brand-new personnel" would help to see total coaching problems. The desire to have crossed line responsibilities was motivated by a desire to understand and work more effectively with the other functional management men. No man seems to feel he has had enough experience. Perhaps this reveals a basic humbleness in our management people. The extreme value which each scrap of experience is regarded as contributing is very significant. Someone has said that a mark of a really professional man is that he always feels he doesn't know enough. Maybe we are approaching the realization that an administrator can be classed as a true "professional".

THE CONTRIBUTION OF THE BOSS

In the final analysis, the administrator must learn his own skills. The part played by particular patterns of experience in this developmental process has been examined at some length. Particular jobs certainly contribute to the man's knowledge. But the real assist comes from people, and the most important person is the man's boss. The importance of the subordinate's superior is well told by Douglas MacGregor in his classic article "Getting Leadership in an Industrial Society". There is no single most profitable pattern of relationship of the boss to his subordinate. It takes a highly-skilled boss, often with the help of a skilled subordinate, to set up a good developmental relationship. Indeed, perhaps it is much better that these situations must be tailor-made.

Our friends in the public relations business have got us all talking about images. What is the image of the "good" boss? A vast quantity of time has been spent by the managers who have assisted in this paper in pondering the characteristic of their "good" boss, as seen by the subordinate. The net results—while not definitive—do give one a few handles with which to get hold of the "image". The word picture drawn by the men reporting on their experience has been disturbed as little as possible. A rough attempt has been made to classify and put some order into the thinking of the group. Listed below are the characteristics of the good bosses that seem to emerge from the data, along with the specific words used by the subordinates to express their feelings on this point.

The first boss was a very important man. Those who had a good boss at this stage were very lucky.

> "Inspired a good deal of confidence in your engineers."
>
> "First few years received consideration and encouragement—so important in the early stages."
>
> "First manager was understanding, tolerant but firm—encouraged young men—excellent leader. Stickler for detail and neatness of person. When I made a mistake, it was quickly and quietly brought to my attention (many men delight in bringing errors to the attention of subordinates)".

He was quick to correct faults and insist on good work habits.

The "good" boss didn't necessarily handle the subordinate with kid gloves. The discipline involved in the development of good work habits was appreciated. When the opposite was allowed, the boss fell into the category of a "bad" boss. Later, under the discussion of "delegation and coaching", we will see this point re-affirmed. This is the way these men talked about their superiors who pulled them up sharply.

"Pointed up my short-comings."

"Pushed me to the limit of my ability."

"Hard when an error made, but felt I had complete support."

"Made you feel he had extreme confidence in you—although he could make blunt direct criticisms of your acts."

"Insisted on punctuality—I have handed this down and it works."

"Blunt—almost a bully—never pushed anyone so hard they resigned—clear thinker—sorted facts—administered policy as though he believed in it —no hiding by "the boss says we have to do it."

The good boss was the "right kind of man".

Kind of a man he was:

"Sense of fair play."

"Had interest and enthusiasm for job."

"Keen intellect."

"The value of decisiveness and leadership by demonstration."

"Taught by example."

"Helped because he did most things wrong—everyone knew it and I was able to see mistakes which should be avoided."

"The two good bosses—well organized—knew the technical details very well — could make people under them work efficiently — people automatically respected them. The one bad boss drank too much—did not have a "good knowledge" of the business—failed to keep appointments on time—good "party man".

"Three had some qualities in common—integrity and wholehearted loyalty to the company."

He was technically skilled in the business — on top of his job.

"Knowledge of business."

"Man of extraordinary ability."

"Excellent knowledge of the business."

"Exceptionally good at his job."

"Complete knowledge of business — searching and inquisitive mind—ability to draw out subordinate by questioning and correct misconceptions and inaccuracies without emotionally upsetting me. I soon learned to be well prepared on any subject. I went to speak to him and kept myself completely informed on current conditions around the mill. Some sessions sticky—you knew you were dealing with gentleman equipped to discuss and direct the business."

"Outstanding ability."

"Ability to define competitive objectives and take remedial action."

He had good analytical skills and helped with mine.

"Broadened my thinking—made me aware of important areas of business. He gave me assignments to complete on my own—made me aware that personal success requires cold, hard honest look at everything."

"Instilled in me 'complete staff work'—ability to realize all direct effects and side effects—that will be occurred in putting in effect a procedure or taking a certain decision. So often we correct one situation and fail to realize impact on other areas. The other principle is the importance of admitting that the answer to a certain situation is not known."

"Clear analytical approach—think thoroughly."

"One trained by presenting problems—had to solve with no guidance."

"Required to analyze before decision making."

"Analytical sense—weighed all sides."

"Keen intellect."

"Brought home to me the value of thoroughness and efficiency."

"Exceptionally good brain."

"Lived with problem patiently in hopes of resolving, yet when occasion demands can make decisions based on little more than intuition."

"Positive direct thinking — quick accurate judgments."

"Taught the advantage of patience and utilization of situation to establish any part of a long-range, jig-saw puzzle departmental plan. His technique was a wonder to behold—somewhat ignored organization and established department's own position. His plan worked so well

that his department's reputation led to the bleeding away by transfer of 11 key people."

"Gave me full run by expected results—taught me one has to submerge one's ego to a considerable extent in administration—that one has to sit back and listen — weigh and appraise without emotional involvement."

"I would find myself thinking in terms of long-range plans—for the first time I was able to make decisions and put them into effect."

"I learned that in making decisions you should start in a small way—even if the new looks 100 per cent right. Getting something started properly is getting the major part of the job done."

He built a "oneness" to work unit, was a good leader, and created a good atmosphere.

"When my decisions were questioned outside the organization, he came to my defence."

"Learned the importance of proper controls — maintaining right relationship with staff and colleagues."

"Guidance and thoughtful consideration made for a happy place in which to work."

"First manager worked for had good business judgment, sense of fair play, qualities of leadership. Most of us would do anything he asked—he convinced most of us we could do anything we made up our minds to do and he would support us in our attempts."

He had good "human relations" and was close to his subordinates.

"Got along with people."

"Completely loyal."

"Understood motives and potentialities of people."

"Would listen to your problems."

"Tended to pool our ideas."

"Showed keen interest in my development."

"He imparted something of the right type of confidence between boss and his subordinate, encouraged initiative and imagination, fostered introduction of new ideas, even when they differed from his—'You can do anything but be sure you can defend it'."

"He had understanding—prepared to devote time to individual who has potential for development."

"He was a good listener—no matter what other things concerned him, he gave complete attention to your subject. He never gave the impression the problem was trivial or he was not interested.

He never made an arbitrary decision—encouraged complete objective discussion in which you would present your side—completely. If you didn't win your point, he gave his reasons for differing and was never afraid to reverse himself."

Outstanding skill in development of subordinate-superior relations.

"Interested in you and your potential."

"Stood solidly behind employees, giving credit where due."

He gave the subordinate confidence, enthusiasm and proper "administrative attitude".

"Awakened an urge for self-improvement."

"The advantage of resolution if you made proper decision — even though at the time it might be unpopular with your superiors."

"He developed confidence in you as an individual —made you feel you were making a worthwhile contribution to the organization."

"Made you feel he had extreme confidence in you."

"He taught me people don't like having someone peering over shoulders all the time."

"He gave me confidence in myself."

"He had great enthusiasm and the knack of creating this in me and other people."

"He contributed a positive attitude — to keep driving toward accomplishment, not to take no for an answer when you felt job could be done."

He was a good "delegator".

"Good bosses gave you a job and let you do it—yet were always ready to help with their knowledge and experience. Then did no more than outline limits of the job."

"A good boss believes in assigning jobs and permitting you to do it — realizing that one could learn only by doing and that mistakes of judgment should be considered as part of the cost."

"His typical remark was 'You know more about it than I do—go and do it your way'."

"Left entire problem with you with no strings and expected final report after you had it in your hands."

"He trusted my judgment completely. I don't know the amount of indirect guidance I got—I can't recall a single instance when under good

bosses I did anything that seemed to be anyone's idea but my own. Working in that atmosphere was easy—I felt they were interested in results only and methods were my responsibility. I worked harder and feel my work was better quality too."

"By letting me run my own mill, gave me encouragement and advice when most needed — and brought me back in line in a most decisive yet most pleasant manner when I strayed."

"Preparation for specific things—yet keeping up to date on day to day operations—'having one's homework done'—invaluable."

"He had a hard exterior but a heart of gold. Virtually told me not to bother him—solve them myself. I had a job to do—when you are given a job it is your responsibility to produce, and you are not instructed on how you are to perform."

"He delegated, leaving himself hours of time to devote to issues of primary importance."

He was a good coach.

"Spent practically all his time coaching and encouraging his subordinates — demands of performance were tough, but attitude to the individual was kindly and helpful. He defined outline of task clearly, left details to individual and never interfered but managed to be available at the right time to help. He gave advice when subordinates' resourcefulness ended, but never so detailed as to remove satisfaction of personal accomplishments. He instinctively knew subordinates' capacity and geared demands to it. He had infinite patience in directing and encouraging, rejected what did not meet his standards, and maintained one's morale by explaining how to capitalize on errors. He gave full credit and saw that superior heard of it; never did anything to embarrass anyone. He was shocked when heard that someone was hurt in the course of trying to do a good job. He valued dignity and talked of pride in seeing subordinate develop and assume greater authority."

"He encouraged his subordinates to develop their strong points and correct weaknesses. One who is not afraid to encourage subordinate is one who himself usually has great potential and also commands respect from management level. He gives subordinate feeling of confidence and all learn by doing. He avoids harping on deficiencies, maintains dignity of the individual and at the same time produces at high level."

"Always there to give me a hand when I was sinking."

"Tempered my enthusiasm which could get out of bounds."

"Gave me confidence that I would do any job if I put my heart into it."

"Patient—never lost his temper and made suggestions with a smile, yet there was never any doubt about what he meant."

"Understanding in case of errors and appreciative of work well done by giving a feeling of accomplishment and recognition."

"When problems seemed astronomical he and I would go out to some quiet place and discuss them calmly and logically. Some occasions we would not discuss business but just relax. He taught me people frequently get their thinking cluttered with details — sometimes it is a good idea to get away and look at problems objectively."

"Generous in trying to teach me."

"Spent many hours of forward planning—he has a technique of avoiding straight talk and talking all around the subject without stating any policy or giving any direction. I came to recognize this as a training device to generate constructive thought by those reporting to him."

"Integrity and ability to delegate with continued use of the word 'why'. He asked questions when he knew the answers. Use of 'why' gave him appraisal of men and helped train people who didn't know the answers."

"Whetted appetites of those below him."

CHARACTERISTICS OF "BAD" BOSSES

Some of the old bosses fell into the "bad" category. It was much easier to talk, rather than write, about unfortunate subordinate-superior relationships. Nevertheless, the qualities of quite a number of former superiors who didn't measure up were reviewed. This is the way they were talked about by the former subordinates.

He was not good as a person.

"Technically and morally dishonest."

"I just about left rather than accept kind of leadership that meant double-dealing and lack of support in tight situations. At least he taught me not to emulate his methods. You undermine loyalty of some by utilizing weaknesses of others."

"He used to call me up to his office quite frequently to discuss things with him and then I discovered one rather frightening fact. The man

was a gossiper. He would talk to me about other members of top management and people who were above my level and criticize them. Eventually, I got to the point where I was terrified of the man because I had no reason to believe that after I had left the office and someone else was in there he didn't rip me up the back. It was a fascinating situation to watch develop, but it was terrifying because, as I say, you never knew what was going to happen. And instead of turning me into what I thought might have been the fair-haired boy, I developed into his whipping boy for two years. It wasn't funny."

His personality was negative and he was not a leader.

"He was considerably older, taciturn, and a hard man to get close to. In reality a warm-hearted person, but put on a hard shell."

"Men small in outlook and limited education. Both displayed suspicion bordering on dislike to people with a university education. They ruled their departments with iron hand, with no opportunity for the individual to develop."

"Had a petty concern for detail. Seldom a memorandum, much less a formal report, would secure an approval without revision in wording. Fine points of composition were not worth the strain of frayed nerves, and lack of positive work activity resulted."

"One man too much involved in detail."

He lacked technical skill and was not on top of his job.

"He lacked basic technical knowledge. This was apparent to all, and he was looked down on; his whole division suffered."

"One boss was so nervous he succeeded in making his design staff as nervous as himself to a point where we began to wonder if we really knew our jobs or not."

He made for poor work habits.

"He was satisfied with less than good work performance. In this kind of situation, the amount he sees (of good work) decreases with time unless concrete steps are taken to overcome pleasant inertia. Some system of audit supplies pressure. Some men were idle because of insufficient work, and this was bad for morale and not a condition men like."

He was bad at decision-making.

"He was afraid to take a stand. He would put things in drawer and hope problems would go away. Morale suffered by failure to make decisions and department lost prestige."

He was a bad delegator. He did not allow subordinates to have a sense of accomplishment.

"He was a superior who dealt over my head on matters that were my responsibility."

"He gave me no large area of final authority. All decisions subject to review, correction or even being made by someone without my knowledge."

"He was wanting to have all the details—wanting to have a 'vote' before you did anything—which gave impression that you were not capable of making almost minor decisions."

"He did not permit subordinates to make decisions or exercise authority. Subordinate performed work up to that point — even recommended course of action—but from then on 'he took over'. You worked 'for' not 'with' and felt that he was a ceiling on your development. He discouraged application of best efforts, stifled initiative and affected morale, with no inner satisfaction of accomplishments."

"He refused to effectively delegate."

"He delegated nothing, gave few directions and formulated few ideas."

"He was easy-going, not particularly ambitious, and seemed to forget objectives in his pre-occupation with detail. The result—one had to think 'how would the boss do it?' rather than 'what seems to be the best way'? He kept control by parcelling out work amongst several people. No one but he had the whole picture — jealousies, misunderstandings and damn-fool errors were appalling. He used the staff as line, and line people were blocked from the top. Staff issued field orders. Line people, not being sure they were from the boss or were personal orders of staff men, tended to ignore most orders and did others half-heartedly. The frustration put us all back. We couldn't be friends among ourselves or with other departments."

He was poor at coaching.

"He had a dynamic personality. Instead of developing those surrounding him, he used them as work horses, and gave them no opportunity to express their ideas before top management — a one-man show."

"He erred by omission—paid no attention to the rank and file men and just learned the immediate job."

"A boss too preoccupied with his own problems to help develop the skills of his staff, and the atmosphere was thus not conducive to self-development."

"He refused to pass along any information or responsibility, forced to dig out information at night and on our own. He has not developed men who are successful in other phases of business."

SUMMARY

One collaborator made a very good summary statement which deserves special attention:

"All bosses have faults and strong points — one adopts from his boss according to his judgment those characteristics, philosophies or practices which are sound and effective and rejects unsound and ineffective.

"Two things made a most lasting impression—one was constantly looking ahead, planning and determining where you are going instead of backward—about which you can do nothing.

"The other was team work, cooperation of, and participation by, persons concerned in dealing with a problem.

"He was a good boss — gave full support to subordinates (not at the expense of inadequate development of them). He had an understanding of the feelings of people. He had a high degree of imagination and initiative, established policies and objectives and let subordinates know what was expected. He effectively delegated and judged on the basis of achievement."

One final word. It was interesting to note that almost no one said his "best boss" was good at "motivating" the subordinate. Much time has been spent cogitating how to motivate people. The plain truth is that men on the job do like encouragement. Mostly, though, they want the opportunity to do a job and want honest criticism given in the proper atmosphere. They want a chance to learn and a sense of encouragement. Most of these men are full of "motivation" already. The big problem is setting up the situation where it can be put to work.

HOW TO THINK ABOUT ECONOMICS

Cause-and-effect thinking consists of finding out what happened *before* and what happened *after*.

In economics this could be called double-entry thinking, and it is the key to economic understanding.

The double-entry principle (used in bookkeeping) is of utmost simplicity: it merely records where things came *from*, where things went *to*.

When applied to thinking on any subject, this principle enables us to think in terms of the *whole* problem instead of fragments of it.

But this principle of "where-from—where-to" is absolutely necessary in economic thinking.

By tracing the movement of the physical things involved in any problem, it is usually easy to arrive at the whole truth.

An example from nature: the water that falls *to* the earth *from* the sky was previously picked up by the sun *from* the earth.

An example from economics: the money that comes *to* the people *from* government was previously taken *from* the people *by* government.

So the "where-from—where-to" principle is useful in more things than bookkeeping: it is one of the basic methods of economic thought.

—Fred G. Clark and Richard S. Rimanoczy, from the book, "How to Think About Economics."

The High Cost Of Triviality

At what point do accounting and control records become too costly to keep? How can management avoid spending undue time and money on the maintenance of records? The author suggests some simple and effective control concepts to help reduce "the high cost of triviality".

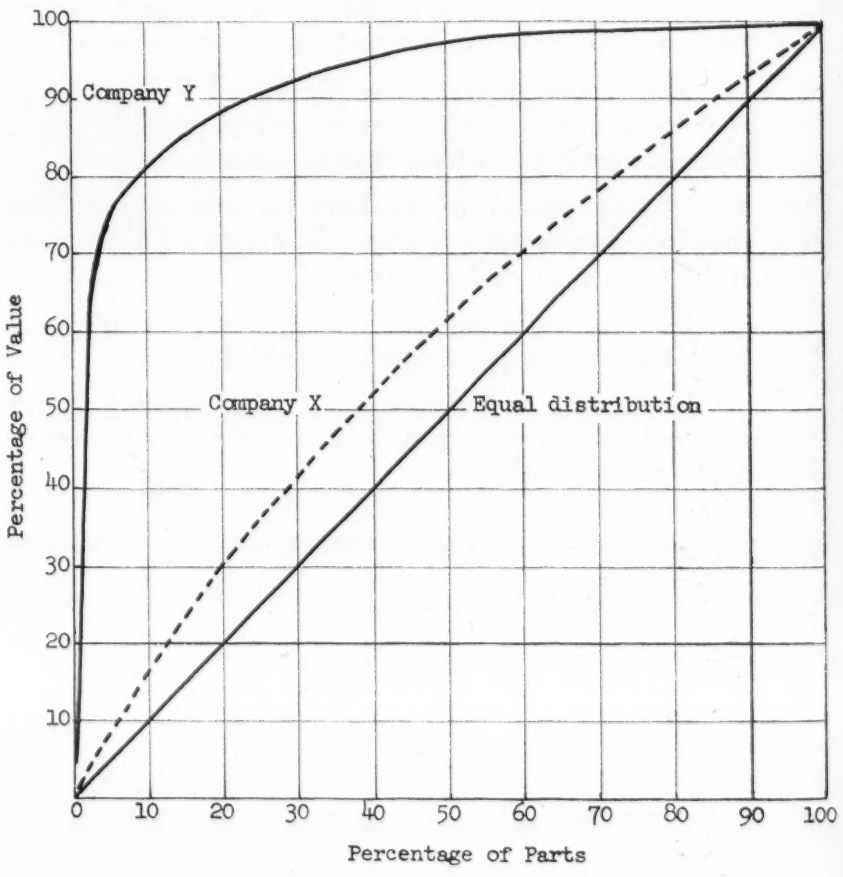
G. S. Blodgett

Probably the largest single area of waste in the accounting and administrative fields is the disproportionate amount of time devoted to the complete and accurate recording of the unimportant. Perfection, and 100% control, tends in accounting to become some sort of religion, whereas the first criterion should always be economy of operation. How often are dollars spent to save dimes, or time expended without any real assessment of return? To avoid what might be described as "the high cost of triviality" requires, throughout our business organizations, a continuing appraisal of the economic value of the various functions in relation to their cost. It requires, in short, a universal application of what in inventory accounting has come to be known as the ABC approach.

THE ABC APPROACH

This approach arose out of the realization that in the inventories of many businesses a very few items (the A items), comprising only 5% of the units of materials in stock, make up perhaps 75% of the dollar value in inventory. Another 20% of the items (the B items) might make up 15% of the dollar value, while the remaining 75% of the items (the C items) total perhaps only 10% of the total dollar inventory. The significance of this is that once the various components of the inventory have been identified as A, B, or C, the maximum effort and attention can be devoted to the important A items; some shortcuts can be made in the handling and recording of B items; and major savings can be made by applying minimum controls to the C items. It is for each company to assess where the breaking points which allow items to be placed in their proper categories should be. It may be, for example, that all items costing less than 10 cents each should be classed as C; items costing from 10 cents to $1.00 as B; and items costing in excess of $1.00 as A. It might also be that for some of the low value items, classification as C items should be avoided for special reasons. For example they may be readily saleable, and proper safeguarding therefore important. It may be, too, that the quantity used of a low unit value item may be such as to justify its classification as B.

Chart I



The importance of an ABC type of analysis of inventories is further illustrated in the following graph, which shows the distribution of the total inventory value in two companies. The straight diagonal line is the theoretical case where each component has the same total inventory value.

In Company X, represented by the dotted line, there is only a slight deviation from the perfectly equal distribution. The top 20% of the items total only 30% of the value; the next 40% of the items 40% of the value; and the remaining 40% of the items the balance (30%). In this company, the value of an ABC approach in inventories is limited. In Company Y, however, where the distribution follows the original example given above, the approach is mandatory unless clerical costs are to be allowed to run on out of all proportion. The inventories of most companies will more closely approximate the distribution shown for Company Y.

It is in the control and recording procedures for C items that the clerical savings possible are realized, but proper application of the ABC approach to stocks can produce much more. Better planning, a reduced risk of obsolescence and probably most important, substantial reductions in the investment in inventories can all develop from the emphasis given to analysis of A and B item movement. In view of the fact that carrying charges on inventories may well run as high as 20 or 25% per year (when interest and all attendant costs such as obsolescence, space requirements, handling, etc. are considered), the magnitude of the potential savings from inventory reductions alone becomes apparent. Close co-operation is required between the commercial, engineering, production, materials control, purchasing, and accounting departments, but once attained by united effort inventory levels can be sharply reduced.

The reductions in inventories will come from the establishment of minimum protective or standby stocks. The A items might be scheduled for delivery on a 1 or 2 weeks' requirement basis, with a protective stock of only 1 or 2 weeks; the B items on a 2 to 4 weeks' requirement with a protective stock of 2 to 4 weeks; and C items on a 4 to 12 weeks' requirement with a protective stock of 4 to 12 weeks. The system requires very strict rules and the closest kind of control on A items, with careful attention to:

1. Estimates of requirements
2. Scheduling of work-in-process
3. Protective stocks
4. Careful and prompt receiving and inspection
5. Rapid flow through the factory
6. Proper safeguards against damage or theft.

It is also important that any system introduced does not leave open the possibility of stoppages in production which can result from short supply of B or C items as well as from lack of A items. If a part is unavailable, it matters little to the factory manager whether it is an A or a C part. Production will still be delayed. Continuous availability of C items is therefore vital to the productive process and must be an integral part of the system.

EXTENSION OF THE APPROACH

It is not the purpose here to detail the operation of an ABC system in inventory controlling, but rather to suggest that the principles involved, which have their most obvious advantages in inventories, are worthy as well of application throughout the business organization. They merge in fact into something of a philosophy which allows in all our activities a concentration on the areas which can yield the greatest utility for the minimum of effort extended. They embrace many of the qualities which are prime requisites of sound managerial thinking, and without this type of approach it is difficult to visualize any manager performing his tasks effectively.

In the paragraphs which follow, a few ABC applications are discussed. Some of them are more or less related to material processing, and indicate how an approach started on inventories can produce derived benefits in other clerical operations.

1. *Processing Material Requisitions Between Departments*

   Complete accuracy in the recording of interdepartmental and interdivisional transfer of material often involves clerical waste. If historical indications as to the magnitude of these movements are available, then it may well be possible to do away with a good deal of this processing. In particular, detailed costing and recording of C item transfers should be avoided. If there is adequate control over goods received into the inventories from suppliers, and assurance that all goods shipped are billed to customers, then the minor inventory discrepancies which will result from reduced accuracy in recording of interdepartmental transactions will not be serious.

2. *Accounts Payable*

   If a company is operating under a standard cost system, with inventories of materials carried at the standard costs, clerical savings can be effected in the accounts payable department by charging C items into inventory at actual cost rather than standard and eliminating the clerical cost of calculating variances. The discrepancies which result

from charging into inventories at actual and relieving at standard will once again be minor. In the accounts payable department it is also suggested that for invoices below an established amount it may be practical to eliminate the clerical checking of extensions and prices. Below a lower amount again it may also be economic to dispense with any checks installed to insure that all goods paid for have actually been received.

3. *Purchasing*

Substantial savings in the purchasing department will result from a proper ABC approach to inventories. Apart from this, however, there are other areas within the purchasing department where savings can be effected. One such might be to have small orders delivered on a C.O.D. basis without a formal purchase order. This can lead to savings not only in the purchasing department but by reducing clerical effort in other departments such as accounts payable, and can reduce the total administrative cost involved in acquiring vital, but in dollars minor, amounts of materials.

4. *Internal Job Orders*

In many companies certain departments (for example the maintenance department) perform work, usually with costs recorded on job orders, for other departments. For purposes of expense control these costs should be charged to the departments benefiting, but where the jobs are small the recording of the costs may be more expensive than the work involved. Where the estimated costs are less than a certain amount, varying by company, it is probably better to ignore any interdepartmental charge.

5. *Fixed Assets*

Fixed asset recording and control lends itself particularly well to ABC analysis. For the major items, elaborate approval and subsequent control procedures may be required for each individual asset; for less important pieces of equipment a somewhat relaxed approval procedure may be allowable, and the recording can be done in terms of groups of assets rather than as individual items; and equipment costing less than say $100 can be treated as expense material, to be written off on purchase with no subsequent costs of recording or control.

6. *Service Parts*

Where there is a need for a company to maintain service facilities and stocks there is a danger that the accounting for this phase of the business, though the dollar volume may be relatively small, may be even more elaborate than for the larger-value commercial operations. The service items processed may be more numerous, and processing costs, if not watched closely, will cut sharply into profitability. Apart from those arising from ABC analysis of service stocks, many possibilities exist for savings with only minor losses in revenue. Even on larger orders for service parts, some clerical savings may be practical. For example, costing of individual parts of even the highest value may be dipsensed with, and average costs applied to them on the basis of established margins. On smaller orders, simplification may be extended to include dropping the requirement of credit approval, and on the smallest orders formal invoicing, with the attendant costs of accounting and collection, may be discarded entirely. A simple notification to the customer asking him to remit the small amount involved will yield a sizeable return without control.

The return of defective parts to the service department, and the subsequent settling of the claims from the customers, is also a problem in many service departments. Some companies have concluded that for less important items it is not worthwhile to check these claims to the original transaction, and simply send the customer the replacement parts at no charge, without the costly reference to the original sale or the check to insure that the part falls under any warranties given.

OTHER APPLICATIONS

The search for ABC applications depends very largely on the particular company. Generally, however, the most significant increases in net revenue will be found in those areas where there is a great volume of work to be done, and where it can be stratified by relative dollar importance. In the commercial organization it may mean detailed analysis of the market to enable concentration of the sales effort on those areas, and on those dealers, where the potential sales are the highest or most profitable. It is not unusual to find salesmen expending their time almost equally among their various customers with no thought to an ABC approach. The result is not only a lower total volume, but also higher selling costs, and increased processing and clerical costs related to selling. Reduced clerical costs per sales dollar will follow rapidly any increases in average order size which can be brought about. One practical way to bring these savings home to them is to charge accounting costs to the sales organizations on the basis of the number of invoices processed. An immediate incentive is created.

To introduce a note of caution, in certain of the ABC applications we give up some of the advantages of standardization. If our processing of A, B, and C items, of whatever nature, involves different techniques for each, then the savings resulting from reduced effort may be offset by the ill effects of non-standard procedures. With the introduction of computers and their capacity to handle large masses of detail, the advantages inherent in the ABC approach may be somewhat less. On the other hand, if an organization is properly geared to ABC, and its systems and procedures make maximum use of this approach, it may in many companies turn out that the additional cost of computers may not be justified. In any case their availability does not rule out ABC applications, though in some instances their value may be minimized.

In addition, while some standardization in procedures may be lost, increased standardization in other fields may develop. For example in the analysis of inventories one of the requirements of a C item is that it not be peculiar to a specific production run. In the original classification of materials as A, B, or C it may be found that many parts are stocked which are ready substitutes for each other. Because they are to be used for only one model they cannot be made subject to the less expensive procedures used for C items. Increased attention to parts standardization will reduce the number of items which have to be stocked, and will permit the savings which result from their C item classification.

SECURING MANAGEMENT ACCEPTANCE

Most important, and worth repeating, is the necessity to instil in all managers—technical, commercial and financial—the approach itself. While it involves only normal business acumen, and a mental orientation towards the implications of the profit motive, it is disturbing to realize that there are relatively few persons in any business who seem to gear their activities to this concept. Some persons seem to have an almost intuitive understanding of it, and others seem incapable of even being taught. These latter must often be discouraged from their precise accounting, for in many instances closer controls and more detailed records which multiply expense must be guarded against. Constantly kept in mind must be the realization that accounting is never an end in itself. It is a vital tool of the business organization, but the extent to which it is carried out and the detail in which recording is done must be made subject to economic analysis. Accounting for the sake of accounting should always be avoided.

It is interesting to note that even some accountants who are members of professional societies find this hard to grasp, and when they move from auditing into administrative positions in industry suffer from an inability to adapt themselves to this type of thinking. This is not only regrettable but difficult to explain, for auditing itself uses techniques which rely on statistical methods, and which direct the auditing effort to seeking out the significant. There will be little if any opposition from most auditing firms to the introduction of ABC techniques. Their criticism and appraisal should indeed be welcomed.

A plea for an ABC approach throughout the business organization should not be misconstrued as any condoning of sloppiness or of laxity in clerical procedures. On the contrary it implies a much higher degree of intelligence, and in the installation of procedures very detailed initial analysis of the consequences. There should also be frequent test checks to insure that any revenue losses are continuing to be outweighed by cost reductions. Capable systems analysts who can apply ABC with proper respect for needed controls are required, for the systems used should meet the demands of internal control. However, while some checks are given up the control in more important areas is strengthened, so that the end result can be the miximum control for the least amount of controlling.

OUR DATED DOLLAR

We must not be misled by our use of the same name, "dollar", to describe the various generations of monetary units appearing in the company's records. The fact is that every dollar is a *dated dollar,* and this becomes a matter of real consequence in a period of sustained inflation.

A 1940 dollar, for example, is not even a close relative of the current 1959 dollar, and it is nothing short of arithmetic folly to treat a 1959 dollar of revenue received as the equivalent of a 1940 dollar of plant capacity consumed.

The fact is that it takes more than two 1959 dollars to match one 1940 dollar of cost incurred, and if the taxpayer conducts his business, and is taxed, on the basis of the assumption that he is breaking even if he collects one 1959 dollar for one 1940 dollar of plant investment used up, he will not stay in business long.

—William A. Paton, Professor of Accounting, University of Michigan

Operations Research in Practice

The Hydro-Electric Power Commission of Ontario has been active in the application of operations research techniques. The author describes three of the projects to which these techniques have been successfully applied in order to illustrate the wide range of problems that may be solved by operations research.

WILLIAM SHELSON

The efficient management of business enterprises is becoming more difficult as their size and complexity increases. To meet the greater demands made on them, managers have encouraged the formation of specialist staff groups to provide independent and detailed advice in specific fields of interest to the company. In line with this trend, a new type of staff group has recently emerged, with the field of activity that has become known as operations research.

The principal purpose of this paper is to show how one large Canadian enterprise, the Hydro-Electric Power Commission of Ontario, has put operations research to work in solving a number of difficult operating problems. A second purpose is to illustrate in realistic, concrete terms the nature of some of the activities that come under this general heading. Too often, operations research has been subject to considerable fuzziness and lack of clear understanding by Canadian businessmen.

The field known as operations research is fairly new and should be defined if this discussion is to have any meaning. However, the definition of broad scientific fields is not easy. For example, adequate definitions of "physics" or "chemistry" are hard to come by. Here are two definitions of operations research. The oldest and most widely accepted definition by C. Kittel, an early practitioner, states:

> "Operations research is a scientific method for providing executive departments with a quantitative basis for decisions."

A more pragmatic definition has been proposed by E. O. Boshell, Chairman of Westinghouse Air Brake:

> "The process of analyzing and probing into business and its environment is a form of research. When this process involves the use of recognized scientific methods, it satisfies my understanding of operations research."

As these definitions may suggest, the essential difference between operations research and other scientific research is in the phenomena being studied.

Instead of studying nuclear reactions or electronic emission or plant hormones, the scientist is concerned with the behaviour of men and machines at work, with a business activity, with a pattern of industrial production.

TYPICAL PROJECTS

Perhaps the best way of providing an insight into the fields of operations research activity is to look at the titles of some recent papers in operations research:

The Empty Boxcar Problem

> Empty freight cars don't bring much revenue, and there are lots of them in any major railroad, so this problem is worth spending some money on.

Linear Programming Solves Gasoline Refining and Blending Problems

An Operations Research Study of the Collection of Defaulted Loans

> This study was carried out for a bank, the world's largest, and dealt with various aspects of the operation of the small loans department. One problem solved was that of the optimum

length of time to keep after defaulted loans. Borrowers in default were placed in two categories: "non-skips" whose addresses are known; and "skips" who have moved and whose addresses are unknown. The cost of trying to collect from "non-skips" is less than for "skips", and the chances of repayment are better. Also, the size of loan owing affects the chances of recovery, as well as entering into the worth of making an effort to recover the amount owing. After analysis of the available data, tables were prepared showing the optimum "pursuit" time for loans of various amounts to "skips" and "non-skips". For example, with a defaulted balance of $200, the optimum pursuit time for "skips" is 5 months and for "non-skips" the time is 34 months. Implementation of these pursuit rules is expected to increase net profit of the loans department by 33 per cent.

The Travelling Salesman Problem

This title refers to a situation in which a salesman or travelling exhibit must visit a number of cities in the course of an assignment. The problem is to find the route which minimizes the total distance travelled. This problem has been of long-standing interest and has been solved in some special instances. However, a general solution has not yet been achieved.

Queueing with Impatient Customers and Indifferent Clerks

This study deals with a common problem — a queue which will repel prospective customers if it gets beyond a certain length and clerks who pay no attention to the order in which customers arrive.

Application of Operations Research and Digitalized Computational Methods to Forecasting in Baseball

An unusual operations research study carried out for a syndicate of "professional" gamblers.

Application of Servomechanism Theory in the Study of Production Control

Production and Inventory Planning in a Fluctuating Market

A Model for the Allocation of Raw Materials to Blast Furnace Plants

CHARACTERISTICS OF OPERATIONS RESEARCH

The above titles can, of course, only give a glimpse into the wide range of military and business activities which form the subjects of operations research studies. What else is there, besides the subject, that characterizes operations research?

a. *Staff*

One characteristic will be the type of person who finds himself in this field. He will almost inevitably have a scientific background in engineering, physics, biology, mathematics, chemistry, or some other technical field. Occasionally, an economist or psychologist will be found here. These scientists will be well qualified. Their academic training will generally extend well beyond the bachelor's degree. They will have spent several years with government or industry on research and development projects. Thus, before becoming involved in operations research projects, they will have demonstrated their ability to handle difficult problems in their particular scientific fields. Furthermore, they will have deeply imbedded in them the characteristics of any first-class scientist or engineer, a sense of curiosity, a respect for measurement, and a passion for objectivity.

b. *Organization*

The form of organization for operations research is another essential aspect. Operations research is almost always carried out on a team basis, with members of different scientific backgrounds devoting full time to the project. The diversity of talents enables the team to survey a problem from many viewpoints, ensures that all the skills required to solve the problem are available, and encourages critical analysis of possible solutions before submission to management. Often, the team is enlarged and made more effective by the addition of a line man familiar with the actual operation being studied. In any event, close liaison with the manager in charge of the operation is always essential to ensure that the team's terms of reference are precise and adequate, and to provide management guidance on matters of policy. There must always be mutual respect and confidence between manager and team. Once the problem is formulated, the team must be given freedom to obtain all necessary information anywhere in the organization and time enough to digest and analyze the data.

c. *Techniques*

The third element characteristic of operations research lies in the techniques employed in the solution of business problems. Any or all of the mathematical and experimental procedures that might be employed in a purely physical problem are available. The technique usually found necessary first is the statistical collection and analysis of data. The data will include both financial or operating aspects. Sampling and probability theory are often useful at

this stage in enabling useful results to be obtained from limited information. Later on, "model-building" will be used in developing a physical or mathematical analogue of the business system under study. Although models are frequently used in scientific and engineering work, the term "model" is rarely used; instead we refer to such familiar items as Hook's law, valve diagrams and flow charts without thinking of them as models.

Another technique quite recently developed is known as "linear programming". This is a mathematical procedure for finding the best solution to certain linear problems. One typical problem involves finding the lowest-cost acceptable mix of several different raw materials with different purchase costs and different compositions. There is the reverse problem of which components to produce in a refinery from given batches of petroleum so as to obtain the highest profit.

A fairly old technique, but one in which considerable advances have been made recently, is "queueing theory". This form of analysis first proved useful in the design of telephone switchboard equipment adequate to meet anticipated customer demand. Queues are a frequent occurrence throughout our society—in restaurants, at airports, in factories, on the highway, everywhere. Queueing theory will help tell you how many clerks to hire, how many runways to build, how many maintenance men to hire, and so forth. A very recent and powerful addition to queueing theory is the "Monte Carlo" method. Almost any variety of queueing problem can now be solved at reasonable cost by combining the "Monte Carlo" method with high-speed electronic computers.

The "transportation method" is another technique that is being widely accepted because of its direct usefulness. This method will provide the most economic arrangement of shipments from factories to warehouses, or from warehouses to customers, or from oil fields to unloading ports. Required data include the amount of material available at each originating point, the amount required at each destination and the freight or shipping costs between each origin and destination. Abitibi Power and Paper has used this method to cut costs in shipping newsprint from its several mills to all of its customers.

There are other techniques available such as "dynamic programming" and "simulation analysis", but as already mentioned, an operations research team will make use of any mathematical or physical process applicable to the problem at hand. In fact, teams have been known to successfully use nothing more complicated than ordinary arithmetic when faced with highly complex problems.

The use of mathematics should not be considered as a revolutionary means of solving business problems, but rather as one way in which the team may prefer to express a problem so as to better understand and solve it. As a result of their scientific training and research background, the members of the team will inevitably analyze any problem in an objective and flexible way. Ideally they will search, in a free and unfettered interchange of ideas and analysis, for that element of "truth" which will enable them to arrive at a sound recommendation. To the maximum extent possible, recommendations will be based on a quantitative assessment of the situation and a quantitative estimate of the results to be derived from implementation of the recommendation.

EXTENT OF "O.R." ACTIVITY

Some idea of the cost of operations research studies may be of interest. As already outlined, operations research studies are generally carried out on a full-time basis by a team of expensive scientists with freedom to spend their time as they see fit. This is bound to run into real money, from $5,000 to $100,000 and up. So it's feasible to employ operations research only on large-scale problems. In spite of high cost, a number of leading Canadian firms have found it profitable to support operations research staffs, while other firms have made use of consultants. Sometimes an internal team is supplemented by outside consultants. Among Canadian companies with established operations research groups are: Canadian General Electric, Imperial Oil, Trans-Canada Air Lines, Abitibi Power and Paper, British-American Oil, Canadian National Railways, Aluminum Company of Canada, and Northern Electric Company. This list is by no means a complete one.

Reference should be made to the fact that operations research is also being employed by the Department of National Defence and by the military establishments of Britain and the United States. Actually, operations research found its niche during World War II in a variety of military applications. It is in extensive use by the NATO command. General Norstad, present Supreme Allied Commander, Europe, stated recently that

> "Operational research, by revealing methods for more effective utilization of our manpower, our skills, our material, and our resources, is making a significant contribution to the military potential of the Atlantic Alliance. This is of utmost importance, for our strength depends not alone on what we have but to a large extent on what we do with what we have."

OPERATIONS RESEARCH IN ONTARIO HYDRO

Ontario Hydro has been in operations research now about five years, although some work of an operations research character was done before that. The Operations Research Group now consists of a mechanical engineer, a mathematician, and an electrical engineer. Originally, the group comprised an engineer, a mathematician and a physicist. For some projects, the permanent group has been augmented by other staff and line personnel, including an industrial engineer, an economist, a supply expert and an electronic engineer. The largest team has consisted of five people and the longest study has taken eight months. The O.R. Group, although located in Hydro's Research Division, works in close collaboration with the manager for whom the study is being made.

In our projects, extensive use has been made of punched-card and electronic computing machines to facilitate the work. Without such machines, our work would have been considerably restricted, because extensive computation has generally been required both in the solution of mathematical models and for data processing. Occasionally, hand computation using a desk calculator has been found to be more convenient and less expensive than machine computation.

To date nine operations research studies have been undertaken by the Hydro Group, ranging from the prediction of lake levels to the economic scheduling of Hydro's Southern Ontario System. A brief description of three of the studies will be given in the hope that these will provide a more specific understanding of the principles and practice of operations research.

OPTIMUM SCHEDULING OF THE BECK COMPLEX

Most readers are aware of the extensive generating facilities installed by Ontario Hydro at Niagara Falls, but few are fully informed as to the importance of the installations. The total capacity of the Niagara plants is well over 2,000,000 kw, supplying over one-half of Hydro's generation. Translated into "cold cash", the annual output is worth over $65,00000. Translated into human ability, the output is equivalent to the muscular energy of 100,000,000

Figure 1 – Sir Adam Beck-Niagara Generating Stations

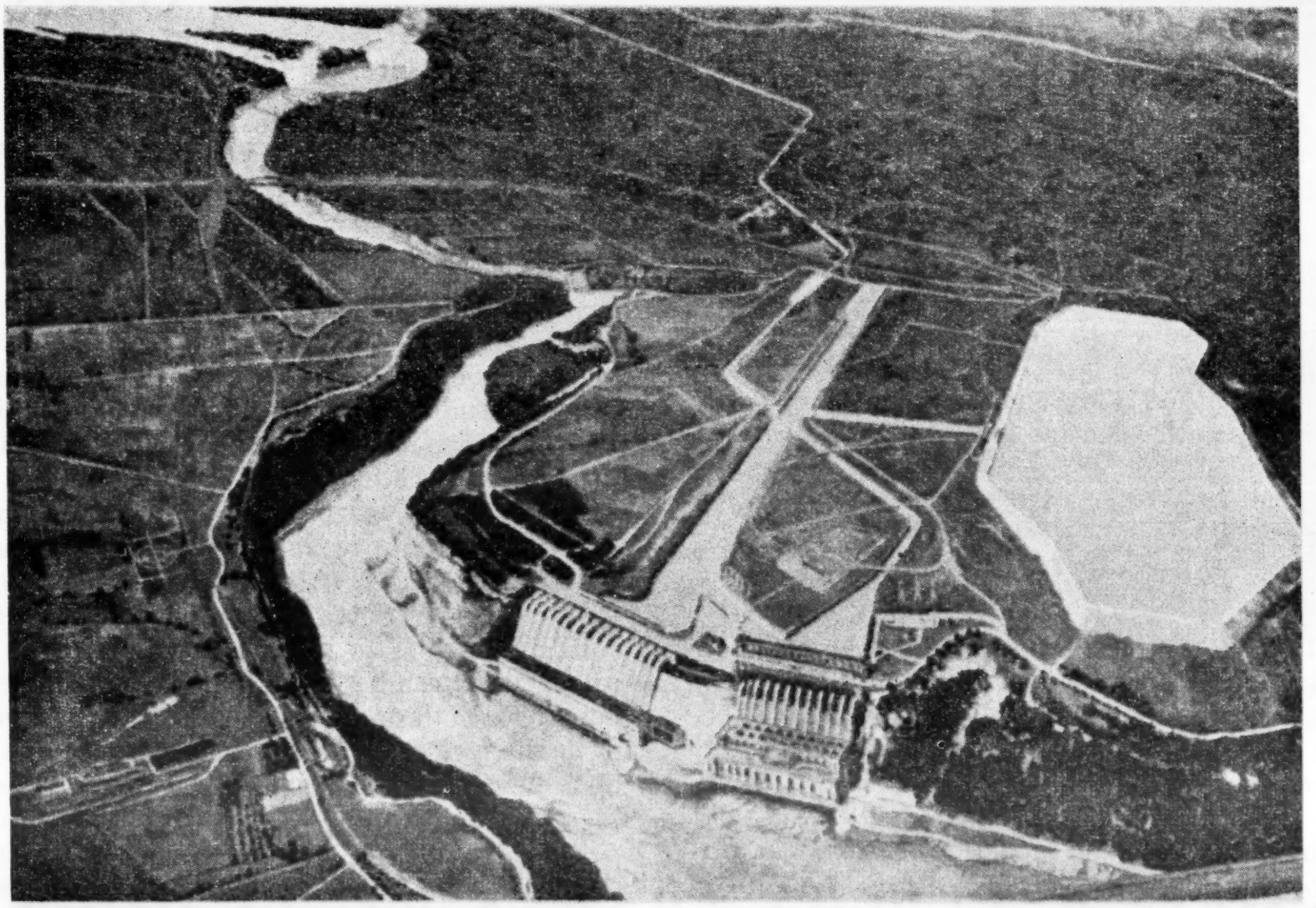
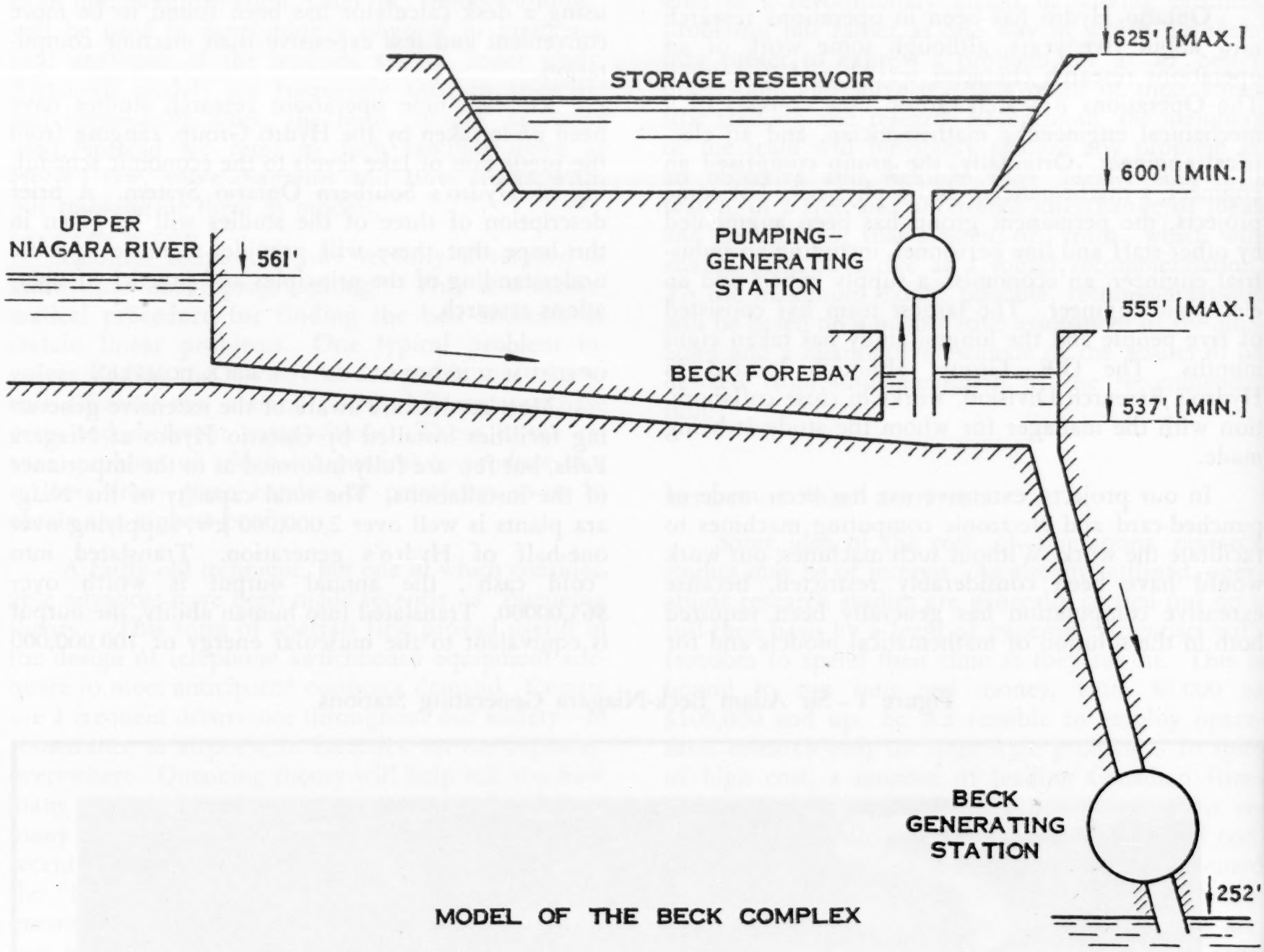


Figure 2 – Model of the Beck Complex

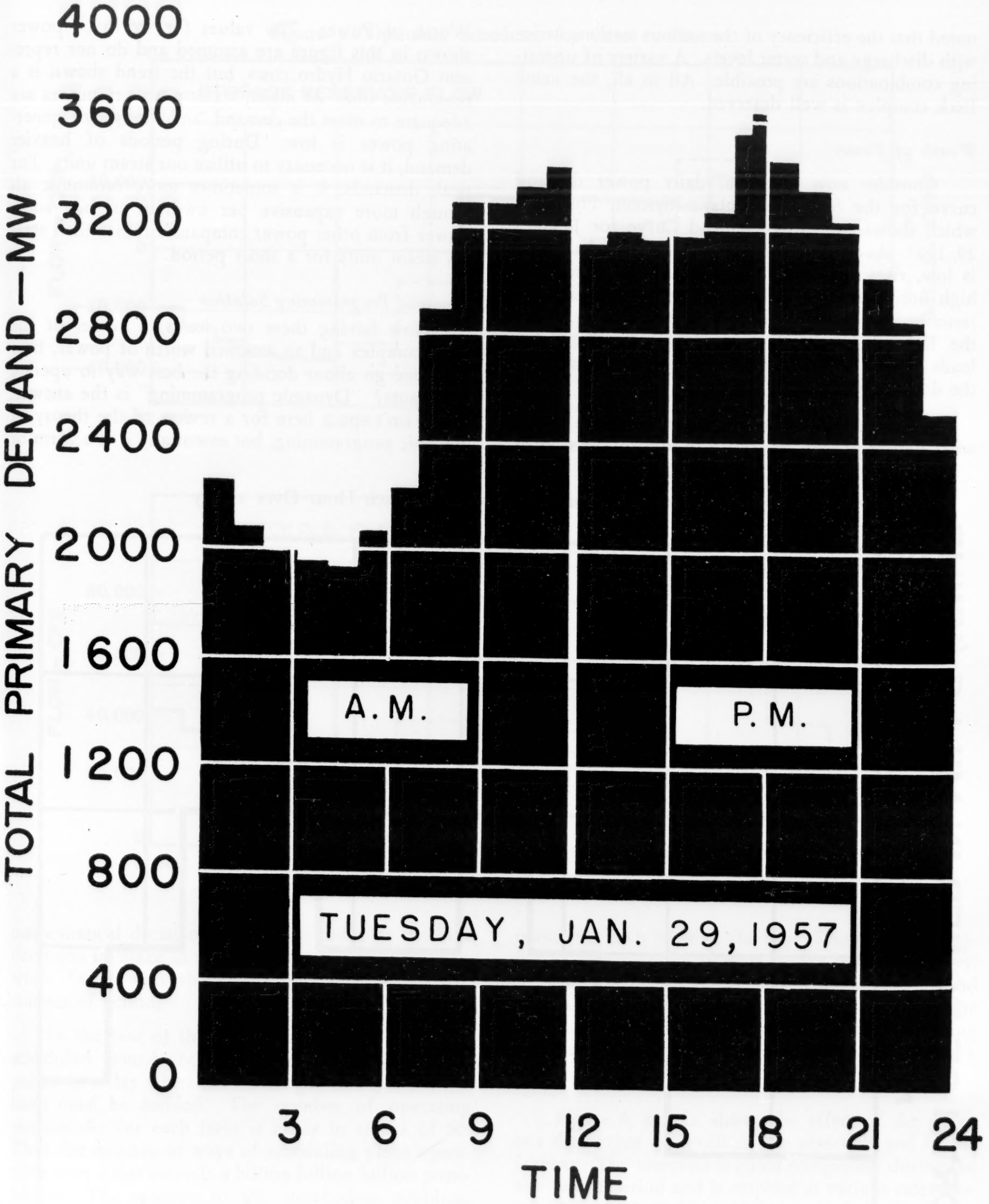


men. There can thus be no doubt of the importance of these power sources and no doubt of the importance of ensuring that they are operated efficiently. A striking feature of the installation is the use of pumped storage as a means of storing energy at night when the demand is low and supplying energy in the day-time when the demand is high. The arrangement of the pumped storage facilities is the only one of its kind and its complex structure is reproduced in Figure 1.

Physical Model

In the foreground of the photograph can be seen two large generating stations, known as the Sir Adam Beck Generating Stations No. 1 and No. 2. To the right is the pumped storage reservoir with its pumping-generating station. At the upper left is the intake from the upper Niagara River, from which water is led through a canal and tunnels to the common forebay of the two Beck plants. Water in the forebay can be pumped by the pumping-generating station into the reservoir, or alternatively water may be discharged through the pumping-generating station into the forebay. All of these facilities are conveniently referred to as the Beck complex.

In Figure 2, Model of the Beck Complex, some of the "model-making" activities of the operations research team can be seen. This diagram is a simplified but quite realistic model of the Beck complex for use in developing a mathematical model. The graphical model is more revealing than the photograph (Figure 1). It is apparent from the diagram that the flow through the conduit depends on the difference in level between the river and the forebay, and that there is an upper limit to the flow. The forebay level can be varied by increasing or decreasing discharge through the Beck plants or by pumping or discharging water at the pumping-generating station. Water pumped into storage reduces the discharge through the Beck plants and the resulting power output from the Beck plants. Water discharged from storage through the pumping-generating plant is also discharged through the Beck plants so the water is utilized twofold. Also, it should be



POWER DEMAND OVER A DAY

(SOUTHERN ONTARIO SYSTEM)

noted that the efficiency of the various stations varies with discharge and water levels. A variety of operating combinations are possible. All in all, the name Beck complex is well deserved.

Worth of Power

Consider now a typical daily power demand curve for the Southern Ontario System, Figure 3, which shows the Daily Demand Curve for January 29, 1957. As would be expected, the demand at night is low, rises sharply in the early morning, remains high until noon, then declines somewhat, gradually resumes its increase with a high about 5 p.m. when the lighting, heating, cooking and transportation loads reach a maximum. As the evening wears on, the demand decreases.

The cost of producing power follows a somewhat similar pattern, as shown in Figure 4, Assumed Worth of Power. The values for worth of power shown in this figure are assumed and do not represent Ontario Hydro costs, but the trend shown is a reasonable one. At night, water-power resources are adequate to meet the demand, and the cost of generating power is low. During periods of heavier demand, it is necessary to utilize our steam units. For peak demands, it is sometimes more economic although more expensive per kw-hour to buy some power from other power companies rather than start up steam units for a short period.

Dynamic Programming Solution

Now having these two items, a model of the Beck complex and an assumed worth of power, how does one go about deciding the best way to operate the plants? "Dynamic programming" is the answer. There isn't space here for a review of the theory of dynamic programming, but essentially it is a form of

Figure 4 – Assumed Worth of Power For Each Hour Over a Day

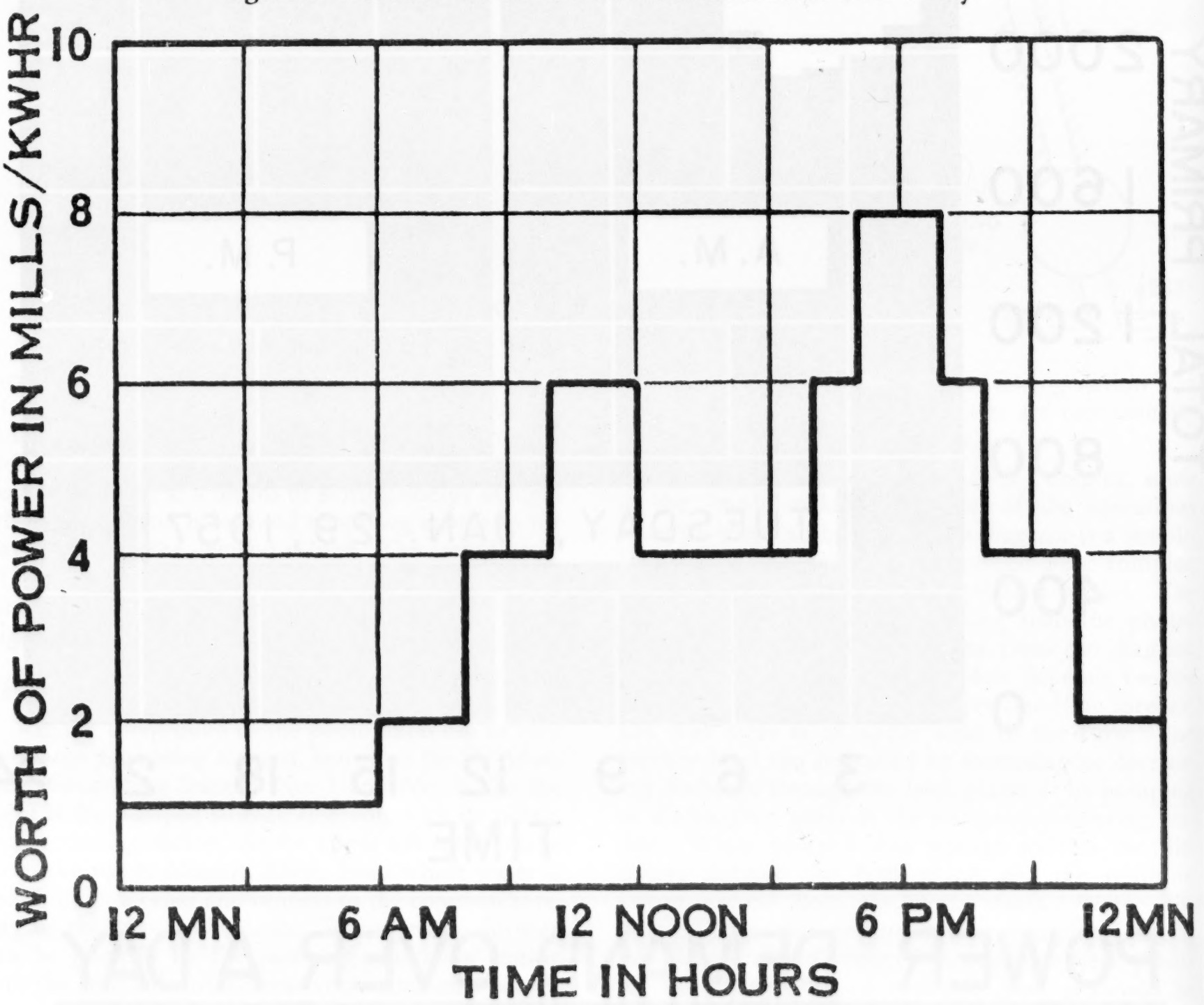
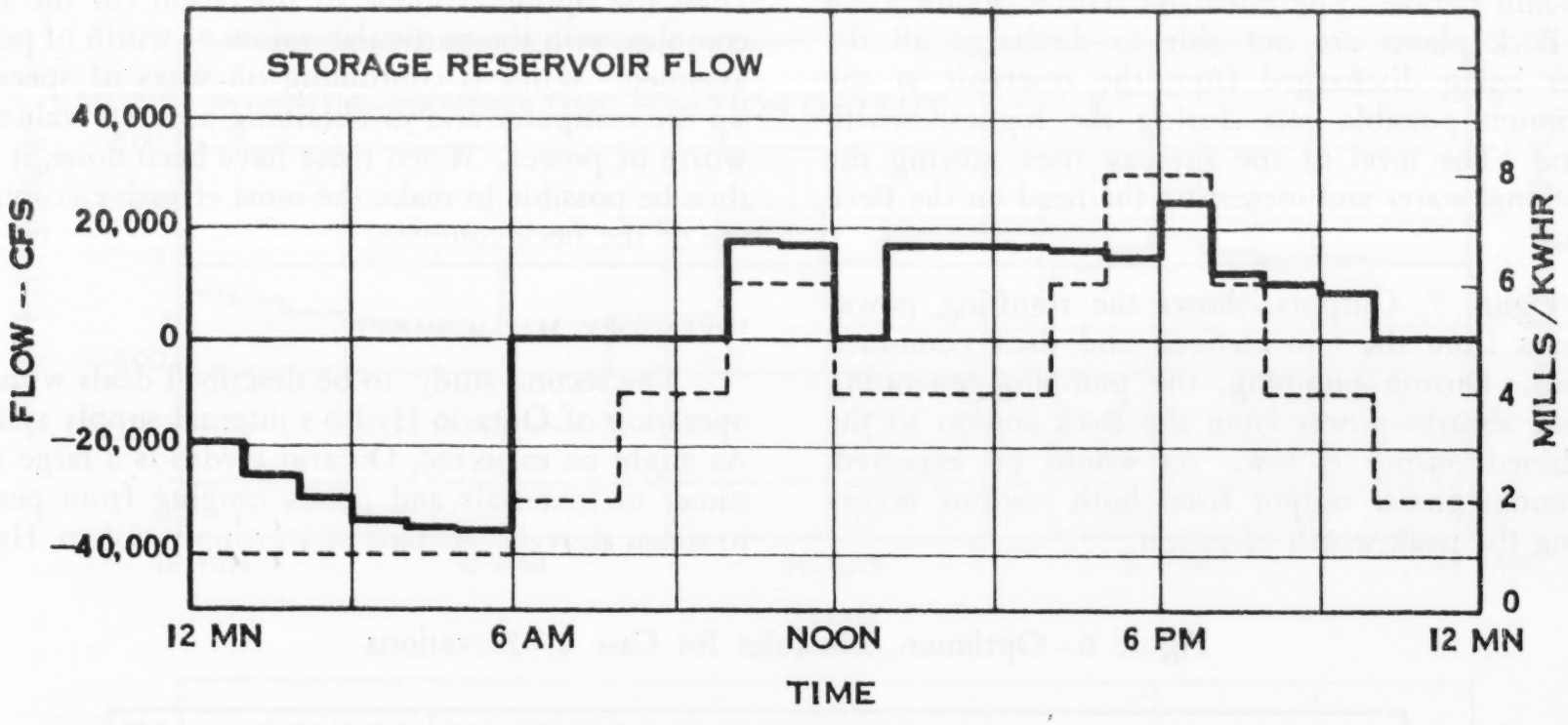
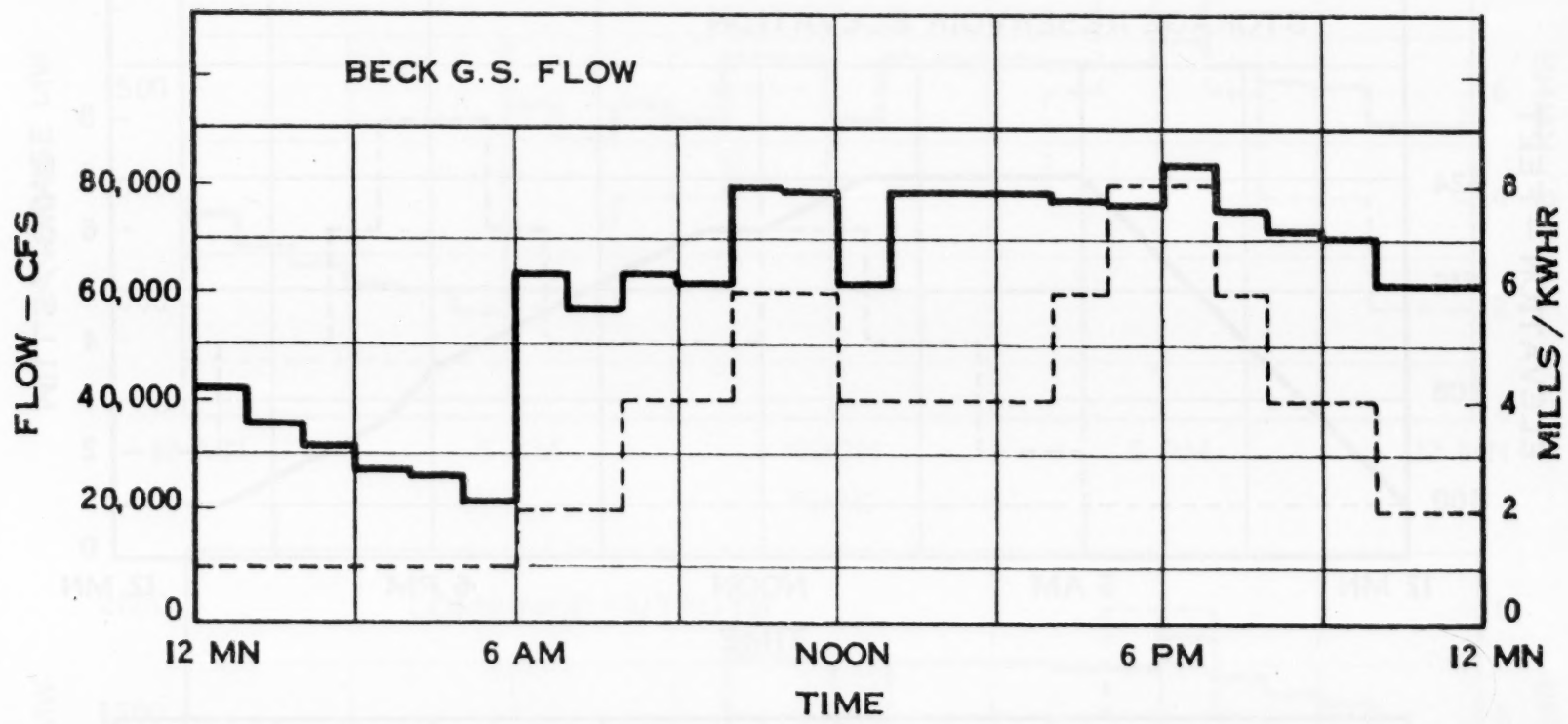


Figure 5 – Optimum Schedules for Case 1 – Flows





mathematical decision-making that indicates the best decisions to make in sequence over a period of time when faced with the choice of many alternative courses of action.

In the case of the Beck complex, the plants are scheduled hour-by-hour, so there are 24 decision points in a day when the discharges through the stations must be decided. The number of operating possibilities for each hour is easily in excess of 50. Thus the number of ways of scheduling plant operations over a day exceeds a billion billion billion possibilities. The solution to this tremendous problem, obtainable only by dynamic programming, is given in Figures 5 to 7.

Figure 5, Flows, shows the discharges through the pumping-generating station and through the Beck plants for each hour of the day. The rate of pumping or generating is affected by the worth of power, so pumping occurs during the low-cost period and generating takes place during intervals when the worth of power is high. Note also that diverting water to storage reduces discharge through the Beck plants.

Figure 6, Levels, shows the effect of the previous discharges on levels in the reservoir and in the forebay. The reservoir is filled completely during the low worth period and is emptied at various rates during high worth periods. Note particularly the fluctuations in forebay levels. The forebay behaves as a storage facility transferring energy from one worth interval into a higher worth interval. Thus the forebay level rises during the transition from a one-mill

period to a two-mill period, and from a two-mill to a four-mill period. The third fluctuation occurs when the Beck plants are not able to discharge all the water being discharged from the reservoir at the maximum possible rate during the highest worth period. The level of the forebay rises, storing the additional water and increasing the head on the Beck plants.

Figure 7, Outputs, shows the resulting power outputs from the two stations and their combined output. During pumping, the pumping-generating station absorbs power from the Beck station so the combined output is low. As would be expected, maximum power output from both stations occurs during the peak worth of power.

The solution shown on the three figures provides the optimum mode of operation for the Beck complex with the particular values of worth of power assumed. Work is continuing on ways of speeding up the computer and in obtaining accurate values of worth of power. When these have been done, it will then be possible to make the most effective economic use of the Beck complex.

INVENTORY MANAGEMENT

The second study to be described deals with the operation of Ontario Hydro's internal supply system. As might be expected, Ontario Hydro is a large consumer of materials and goods ranging from pencils to steam shovels. As part of its supply system, Hydro

Figure 6 – Optimum Schedules for Case 1 – Elevations

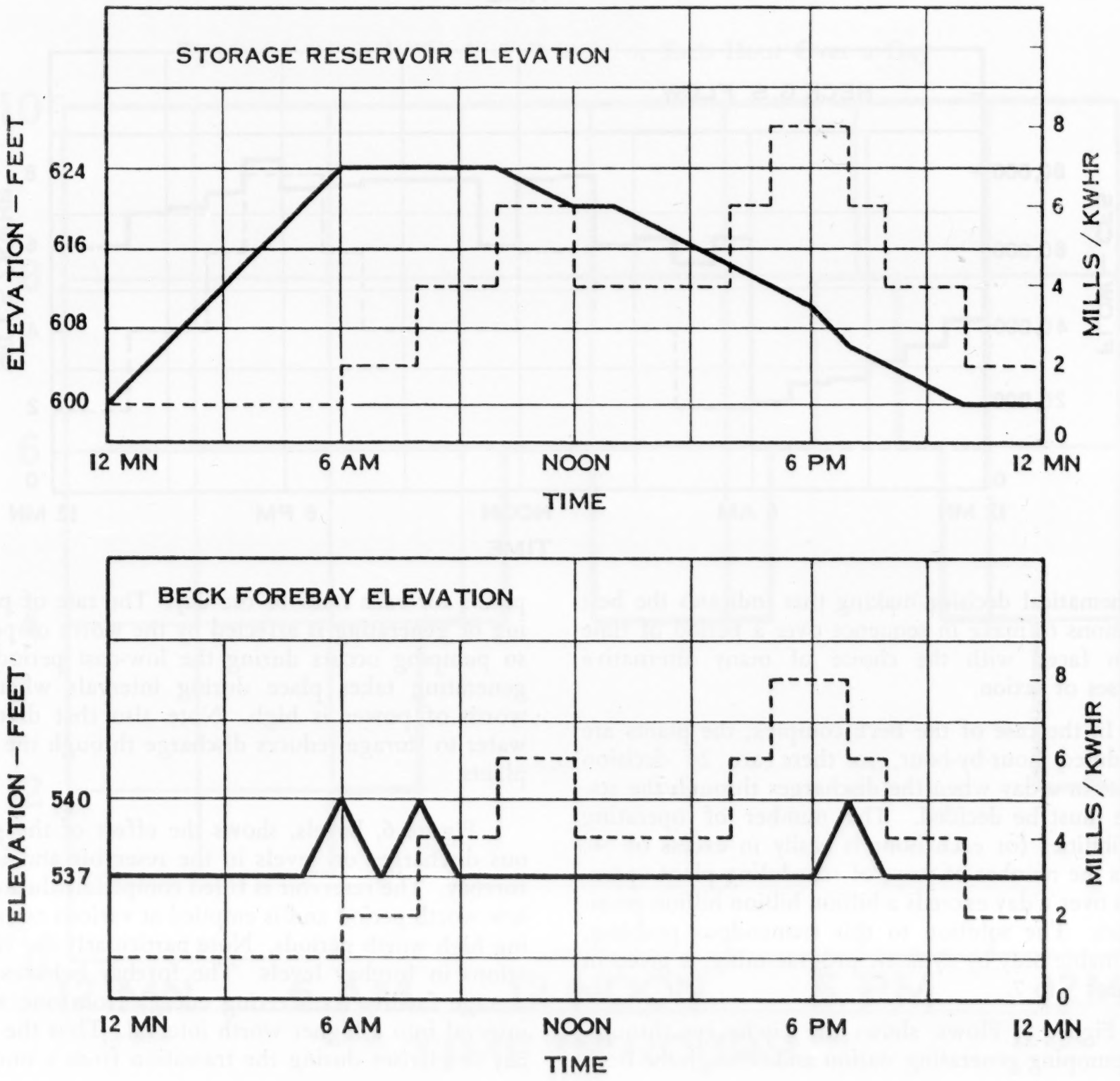
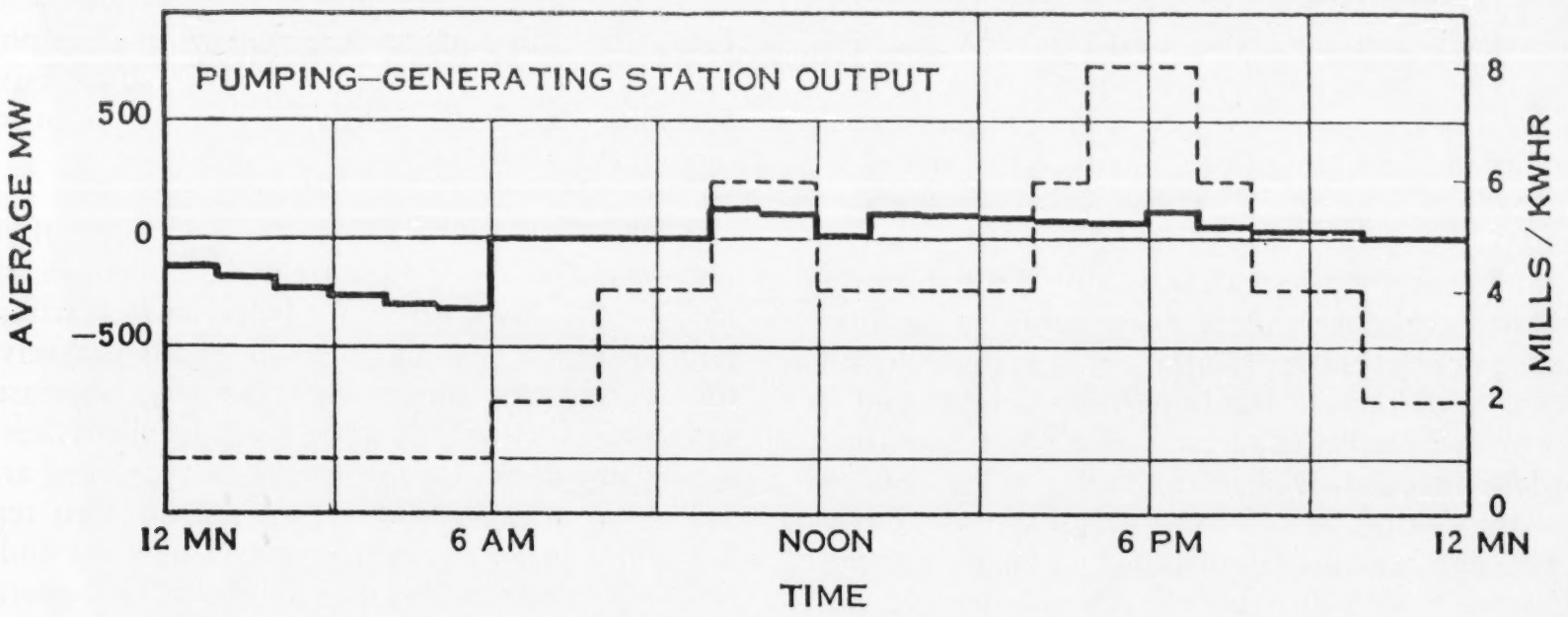
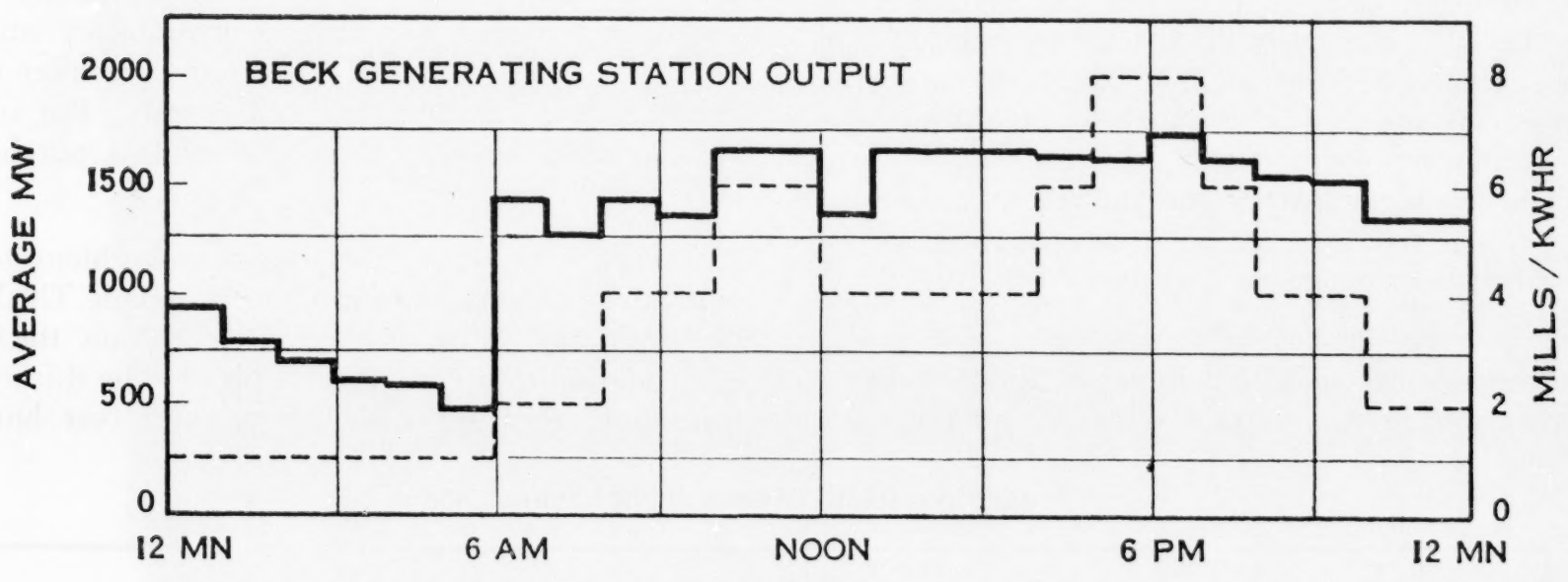
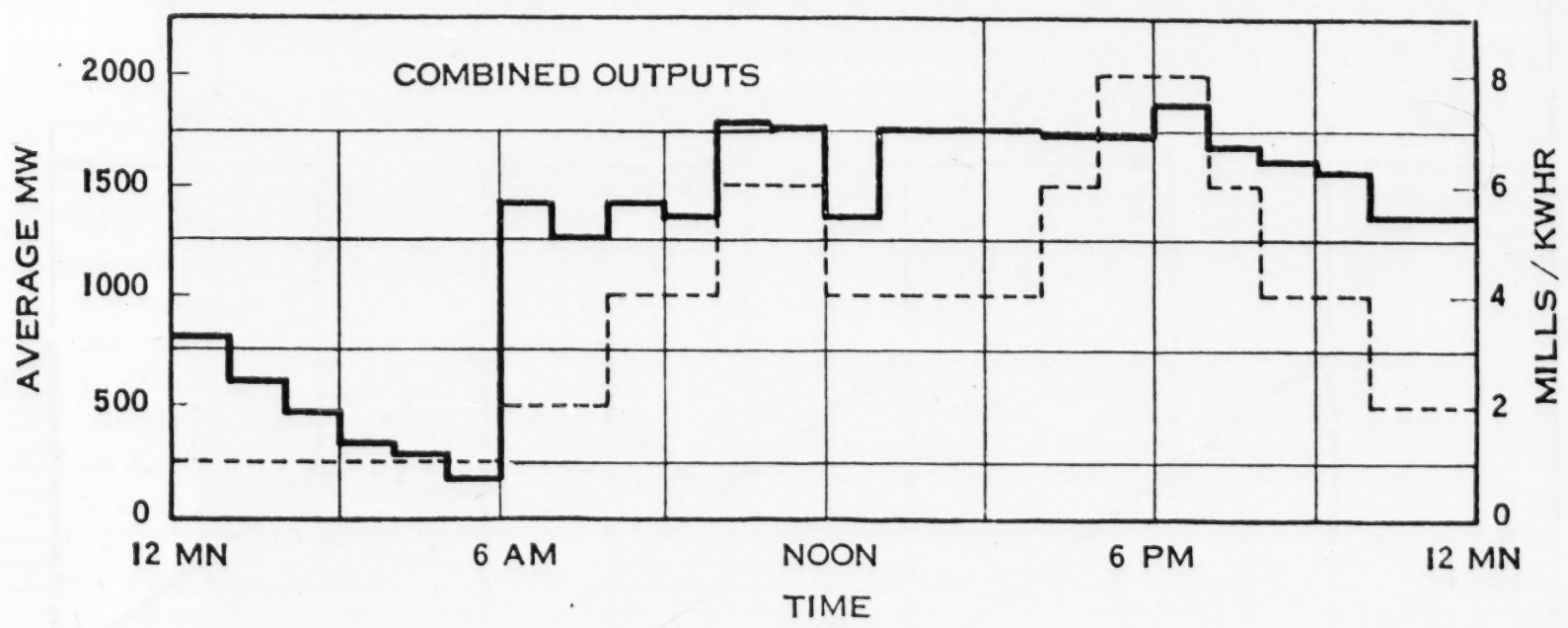


Figure 7 – Optimum Schedules for Case 1 – Outputs







maintains a large central warehouse in Toronto, known as Central Stores, and over a hundred smaller regional warehouses located strategically throughout the province. In the main, both types of warehouse carry stocks of standard items which are used in substantial quantities. Inventories of standard items run to $8,000,000 at Central Stores and $5,000,000 in the regional warehouses. Shipments out of Central Stores are in the order of $20,000,000 per year.

The operations research team was assigned the job of studying all phases in the distribution of stan-

dard supplies to determine whether substantial improvements could be made in a system that was already meeting Hydro's need with reasonable effectiveness and economy. The team began by studying elements of the supply system—purchasing procedures, warehouse operations, accounting requirements, information flow, inventory theory. Measurements were made of lead times, i.e., the time from preparation of a purchase order until delivery of goods to Central Stores, frequency of orders on Central Stores, purchasing costs, warehouse costs, number of unfilled orders, stock levels at Central Stores and in the regional warehouses, transportation delays, and a host of other significant items. Note that two kinds of orders were involved in the study: (1) orders received by Central Stores from regional warehouses, and (2) purchase orders placed with manufacturers by Central Stores through the Purchasing Department. The information collected was then studied, cross-checked, analyzed, discussed, re-analyzed and so on. Finally a report of 400 pages was prepared summarizing the data collected, outlining the analyses and submitting the recommendations, some 31 in number. With few exceptions, the recommendations of the report were accepted by management after the report had been reviewed and discussed.

Scientific Inventory Control

Among the major recommendations was a recommendation that certain scientific methods for inventory control be adopted. This particular aspect of the study will be of interest because it illustrates two approaches characteristic of operations research. First, the solution to a problem in the physical sciences was transferred to a problem in business. Secondly, "simulation analysis" proved useful in predicting the effectiveness of the solution.

Look for a moment at the behaviour of inventory levels in a perfect warehouse operation, shown in Figure 8, Ideal Inventory Behaviour. Starting at a point where a new shipment of goods is received at the warehouse, the stock gradually decreases as orders are filled. When the stock level reaches zero, a new shipment of goods previously ordered arrives. The cycle of usage and replenishment then repeats. Since in a perfect system, usage is constant and lead times are constant, this is a straightforward operation. Is there room for cost reduction? Evidently costs could be reduced by keeping inventories smaller. Interest charges would be lower and a smaller warehouse would result in reduced rentals. But orders will have to be placed more often, so purchasing costs would rise.

Turn now from this business problem to an equivalent engineering problem, Economic Thickness of Insulation. What is the most economic thickness of insulation to use on a steam pipe? The thicker the insulation, the higher the installation cost but the

Figure 8 – Ideal Inventory Behaviour

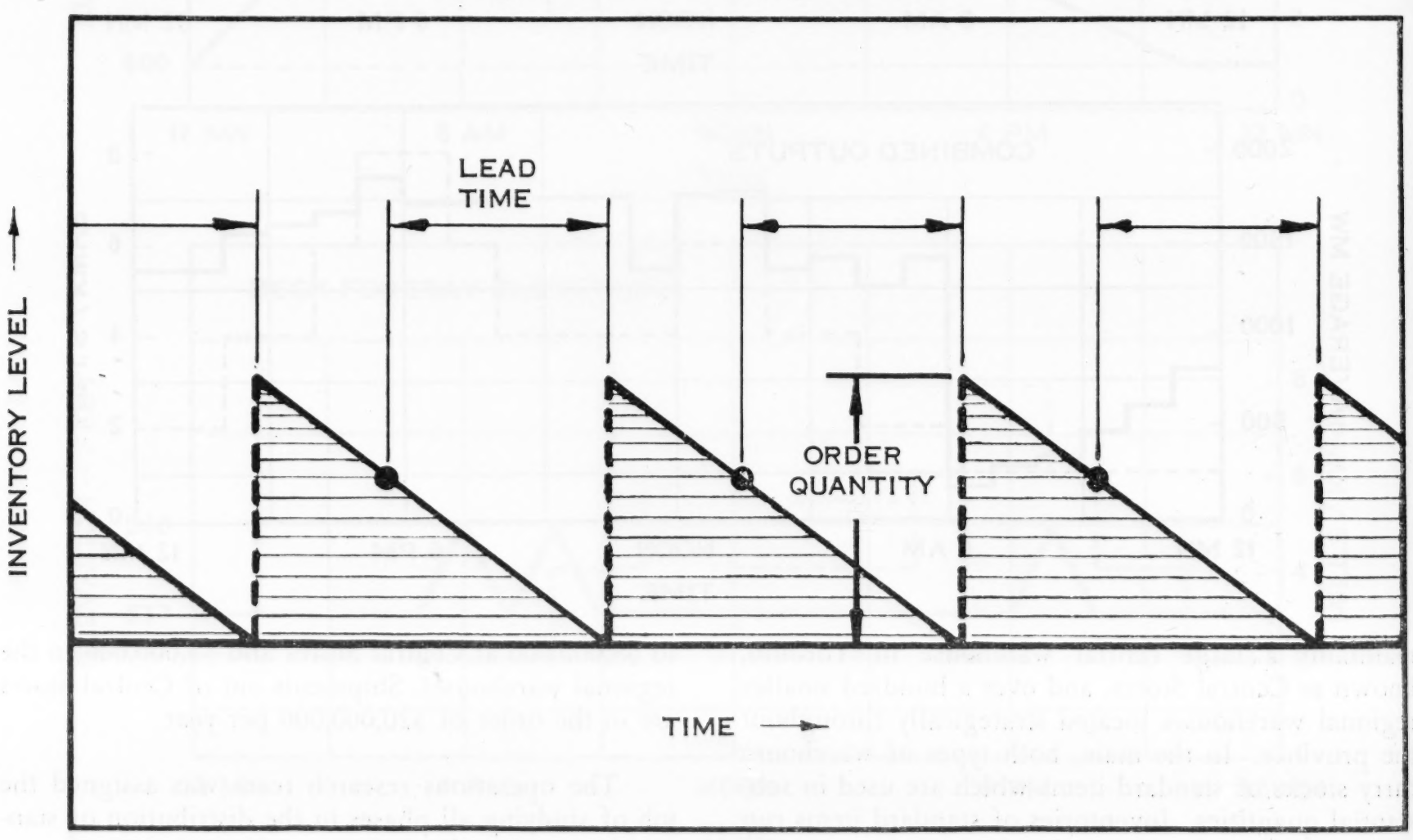
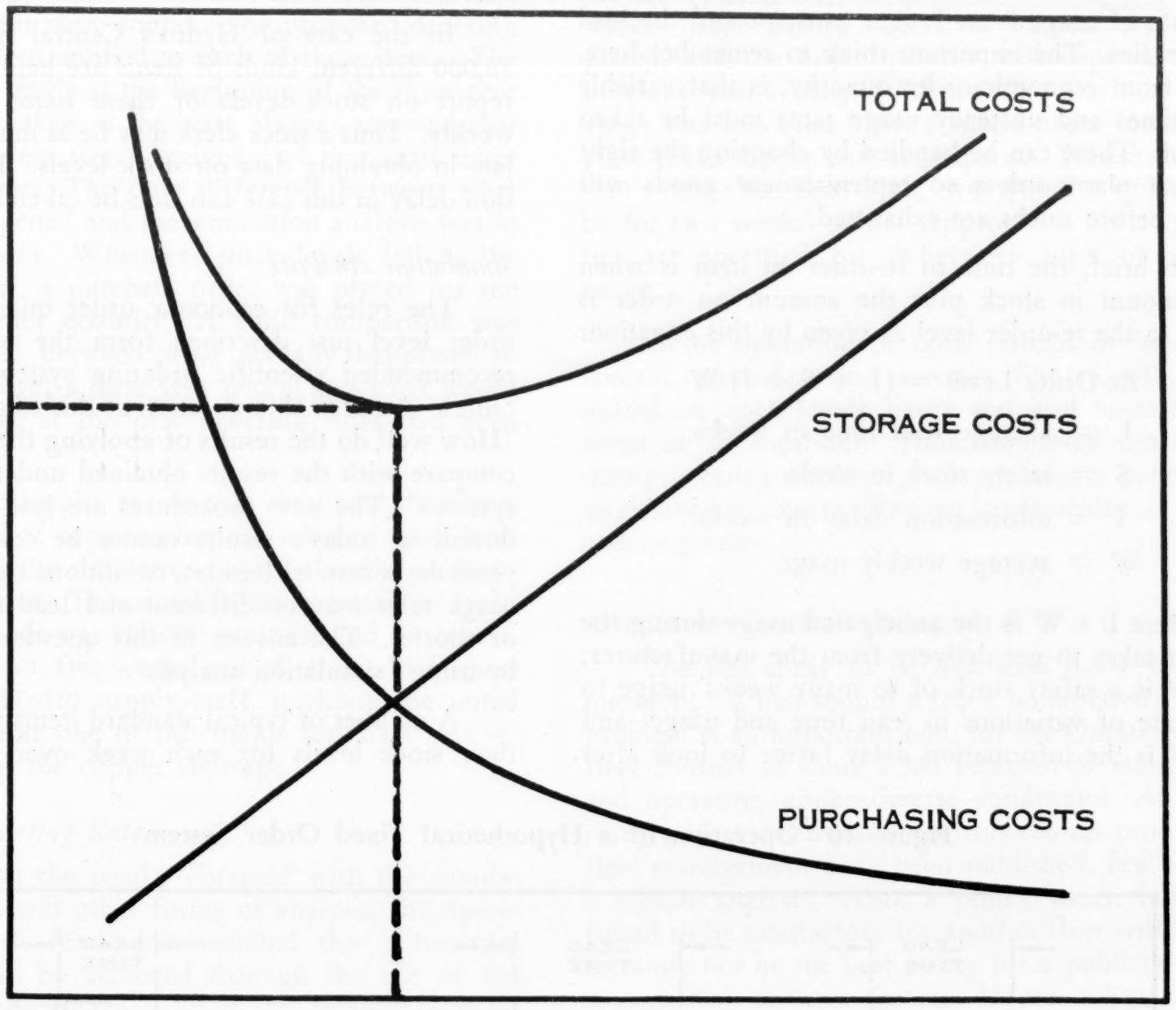


Figure 9 – Economic Order Quantity



lower the heat loss. The solution is that thickness which results in the minimum annual combined cost of installation plus heat loss.

Similarly, there is an economic order quantity which minimizes the combined annual cost of purchasing and warehousing. Purchasing as used here includes the cost of purchase orders, inspection and unloading. Warehousing includes building expense, interest, obsolescence, and similar expenses. As Figure 9 on Economic Order Quantity shows, annual purchasing cost goes down as the size of the order increases. The annual cost of warehousing increases because the average stock level is higher. The economic order quantity, shown by the vertical line, is that order quantity for which the combined annual cost of purchasing and warehousing is a minimum.

There is also a formula for the economic order quantity, easily derived using calculus, which gives the correct quantity directly. All that is required is the annual usage for the item (Y), the purchasing cost per order (P) and the warehousing cost (H). For example, with an annual usage of $320,000, a purchase cost of $15 per order and holding cost of 15 per cent of average inventory, the economic order quantity is $8,000. For an annual usage of $3,200, the economic order quantity is $80; that is, for 1/100th the usage, the order quantity is reduced to 1/10th.

$$\text{Economic Order Quantity} = \sqrt{\frac{2YP}{H}}$$

Y = annual usage of item in dollars

P = procurement cost in dollars per purchase order

H = yearly holding costs in per cent of average inventory value

Consider now a more realistic chart of stock level fluctuation as shown in Figure 10, Operation

of a Hypothetical Fixed-Order System. The size of order is equal to the economic order quantity, but the rate of usage is no longer constant and the lead time varies. The important thing to remember here, aside from economic order quantity, is that variable lead times and unsteady usage rates must be taken care of. These can be handled by choosing the right time to place orders so replenishment goods will arrive before stocks are exhausted.

In brief, the time to re-order an item is when the amount in stock plus the amount on order is equal to the re-order level as given by this equation:

$$\text{Re-Order Level} = (L + S + I)\,W$$

L = average lead time in weeks
S = safety stock in weeks
I = information delay in weeks
W = average weekly usage

Here L x W is the anticipated usage during the time it takes to get delivery from the manufacturer; S x W is a safety stock of so many weeks' usage to take care of variations in lead time and usage; and I x W is the information delay factor to look after usage from the time that the stock level reaches the critical level until the stock clerk finds out about it.

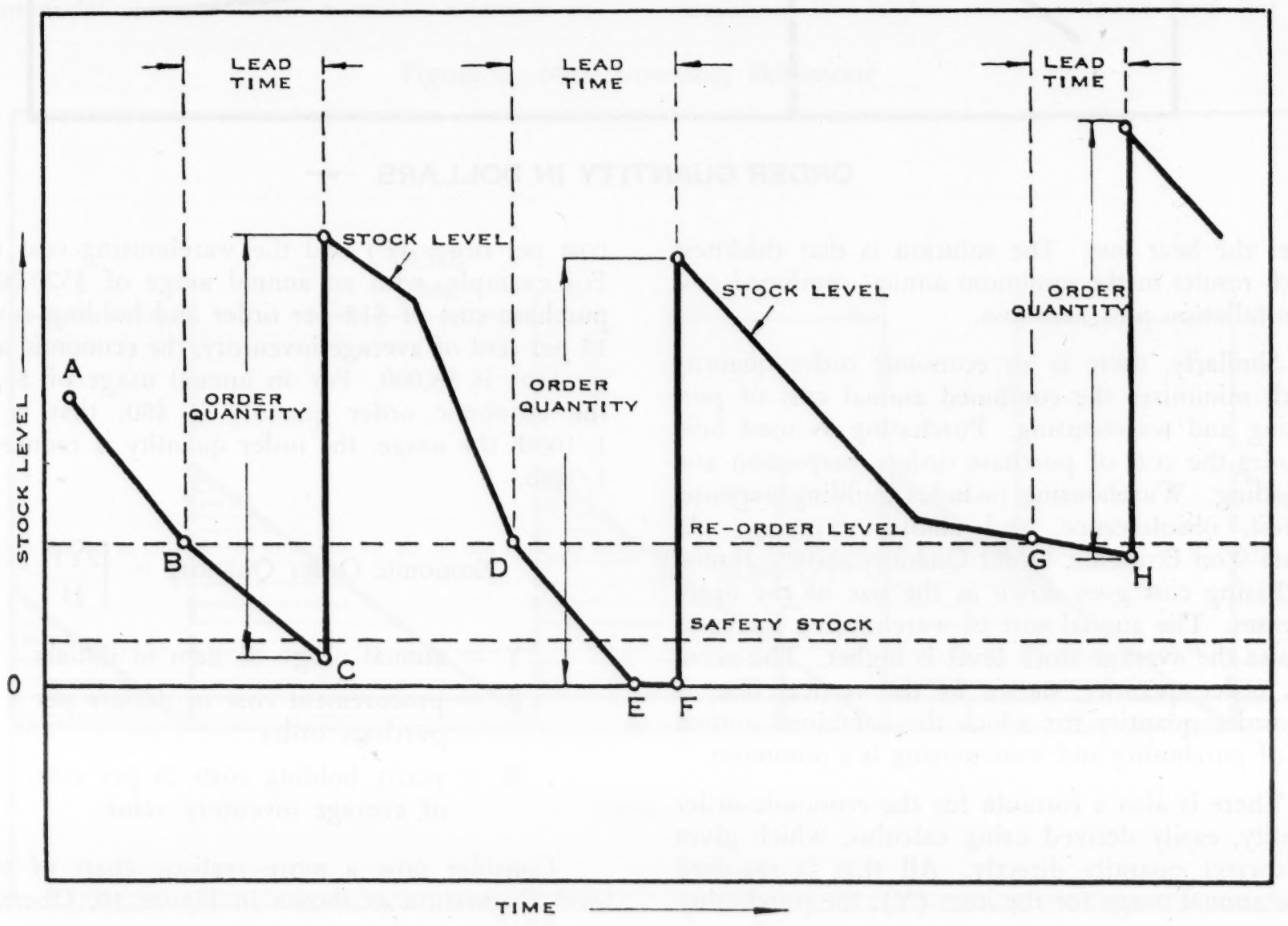
In the case of Hydro's Central Stores, about 10,000 different kinds of items are held in stock. A report on stock levels of these items is prepared weekly. Thus a stock clerk may be as much as a week late in obtaining data on stock levels. The information delay in this case can thus be taken as one week.

Simulation Analysis

The rules for economic order quantity and re-order level just described form the basis for the recommended scientific ordering system at Central Stores. A reasonable question at this stage would be: "How well do the results of applying these new rules compare with the results obtained under the former system?" The new procedures are just being introduced, so today's results cannot be compared with yesterday's results. Besides, conditions change so that usage rates may be different and lead times longer or shorter. The answer to this question was found by using "simulation analysis".

A number of typical standard items were chosen, their stock levels for each week over a three-year

Figure 10 – Operation of a Hypothetical Fixed Order System



period were recorded, the orders for each week of the three years were noted, and lead times for each purchase order were found. The proposed ordering rules were then applied to each of these items. The actual stock levels at the beginning of the three-year period were taken as the start. It was assumed that the same orders were received and that lead times were the same. The only difference between what actually happened and the simulation analysis was in the order rules. Whenever stock levels fell to the re-order level, a purchase order was placed for the economic order quantity. A valid comparison was thus obtained between what actually happened to stock levels over a three-year period and what would have occurred if the new ordering rules had been followed.

As an example, for one of the items studied, a specific kind of copper wire, the average stock level was lower in the simulation, and the weeks of shortage were fewer. The actual figures turned out to be 124,000 pounds vs. 100,000 pounds, and 17 weeks' out of stock vs. five weeks' out of stock. In fairness to Ontario Hydro supply staff, it should be noted that a strike at one of our major suppliers was responsible for the copper shortage.

Regional Ordering Rules

Based on the results obtained with the simulation analysis and other forms of analysis, the operations research team demonstrated that substantial savings could be achieved through the use of the proposed ordering rules. For the smaller regional warehouses, a simpler procedure was developed which can be understood by a stockkeeper who may not be familiar with equations or square roots. The ordering rules for the regional stores are given below:

ORDER SYSTEM FOR SUB-STORES

Re-Order Level

Stock Level = 1/13 of last year's usage

ORDER QUANTITY

Past Year's Usage	Order Quantity
$ 0 to $ 100	52 weeks usage
101 1,000	18 weeks usage
1,001 10,000	6 weeks usage
10,001 over	2 weeks usage

As far as the regional warehouses are concerned, their lead time is short and relatively constant since orders are placed on Central Stores. Also, the information delay time is negligible. Thus, they can permit their stocks to run down to quite low levels, depending on Central Stores to meet their needs. In the new procedure, stock levels will drop to four weeks' usage before orders on Central Stores are placed, and the order quantity will depend on the previous year's usage. Where the previous year's usage was less than $100, a single order for a complete year's supply will be prepared. Where the past year's usage has been high, over $10,000, orders will be for two weeks' usage. Appropriate order quantities are specified for in-between rates of annual usage.

In the operation of both systems of inventory control, up-to-date and accurate figures will be required on stock levels, usage and lead times for all items at all locations. Thus, improved centralized data-processing facilities and procedures have been established to ensure effective implementation of the ordering rules.

VEHICLE REPLACEMENT POLICY

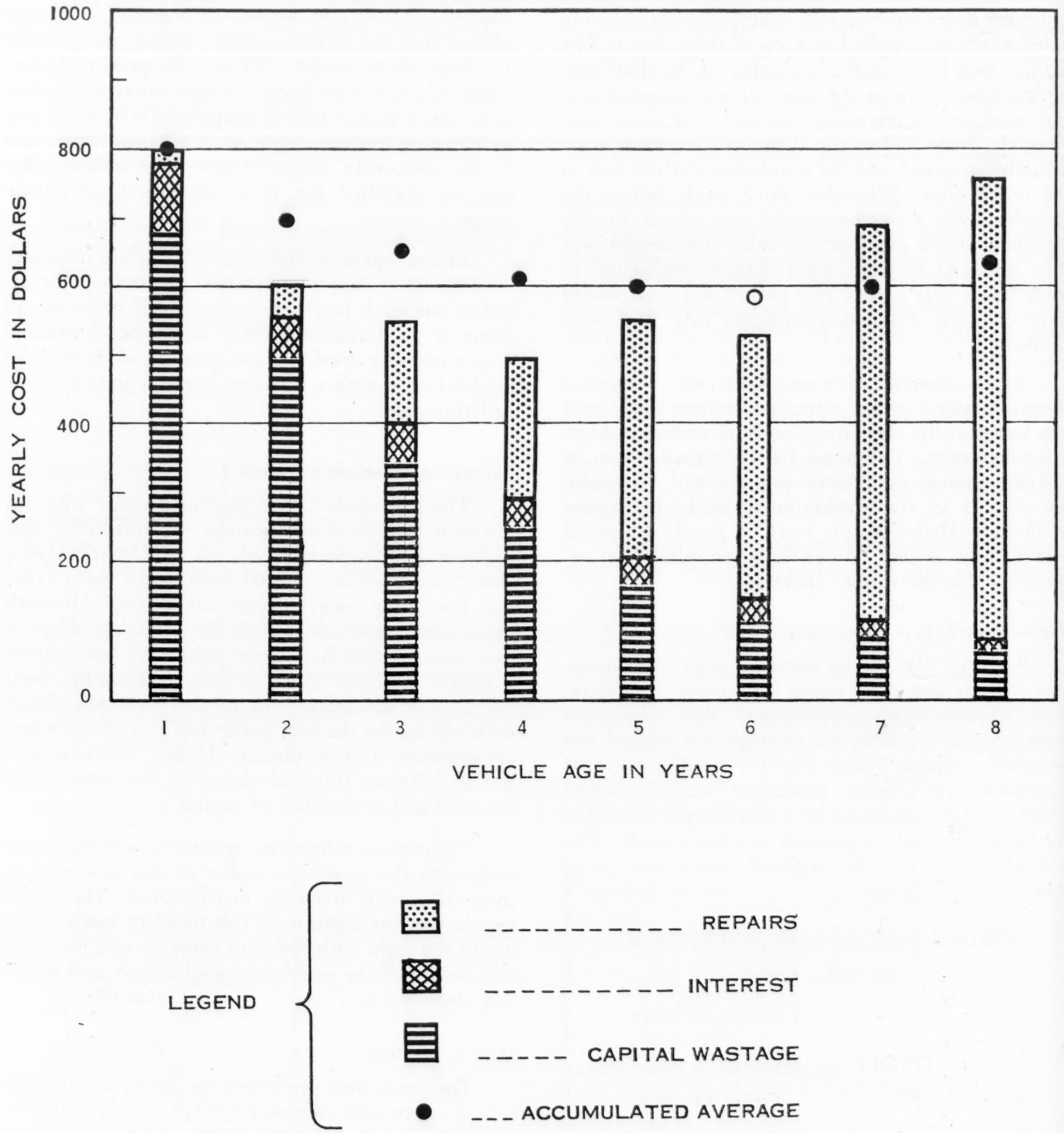
The last study to be described deals with the question: "When should a truck be replaced?" This problem is an important one, for the Ontario Hydro fleet consists of some 2,500 vehicles, of many types and operating under diverse conditions. Although many attempts at solution of this central problem in fleet management have been published, few survive a logical analysis. Also, a policy which has been found to be satisfactory for another fleet will almost certainly not be the best policy for a publicly-owned organization such as Ontario Hydro, which is subject to different financial objectives, tax rates, interest rates and availability of capital.

The way in which the operations research team undertook this project is similar to that described in connection with inventory management. The initial step in the investigation of this problem was a meeting of the team with the fleet manager and his staff. The nature of the problem was discussed, and tentative objectives and conditions were established.

Data Collection

The team then undertook to find out how the fleet was operated in practice, what sort of performance records were kept, the system of cost accounting for vehicles, the quantity and quality of repairs, etc. To obtain this information, the team went out and talked to the people in the garage, the accountant of a typical Region, some of the field mechanics, vehicle users, the cost accountants, the vehicle purchasing agent, and many others involved in the complex task of handling a large operation. All sources of data relevant to the study were located and the validity of the available information was examined. At this

Figure 11 – Average Costs for Similar Vehicles



stage, nothing was taken for granted. All data were cross-checked wherever possible.

As might be expected, this survey disclosed many aspects of fleet operations which were subsidiary to the main question, but on which information was welcomed by the fleet manager. Although these side benefits will not be described here, it is desirable to mention them because almost any serious operations research study is bound to help solve problems aside from the assistance provided in the major problem.

Analysis of Vehicle Costs

In reviewing the major problem after the survey, the team defined the solution to the problem by the following criterion: "For the typical vehicle in each

group of similar vehicles with similar usage, the cumulative average cost up to the optimum replacement age should be less than the cumulative average cost up to any other possible replacement age." This criterion was subject to the limitation that used vehicles would not be purchased as replacements.

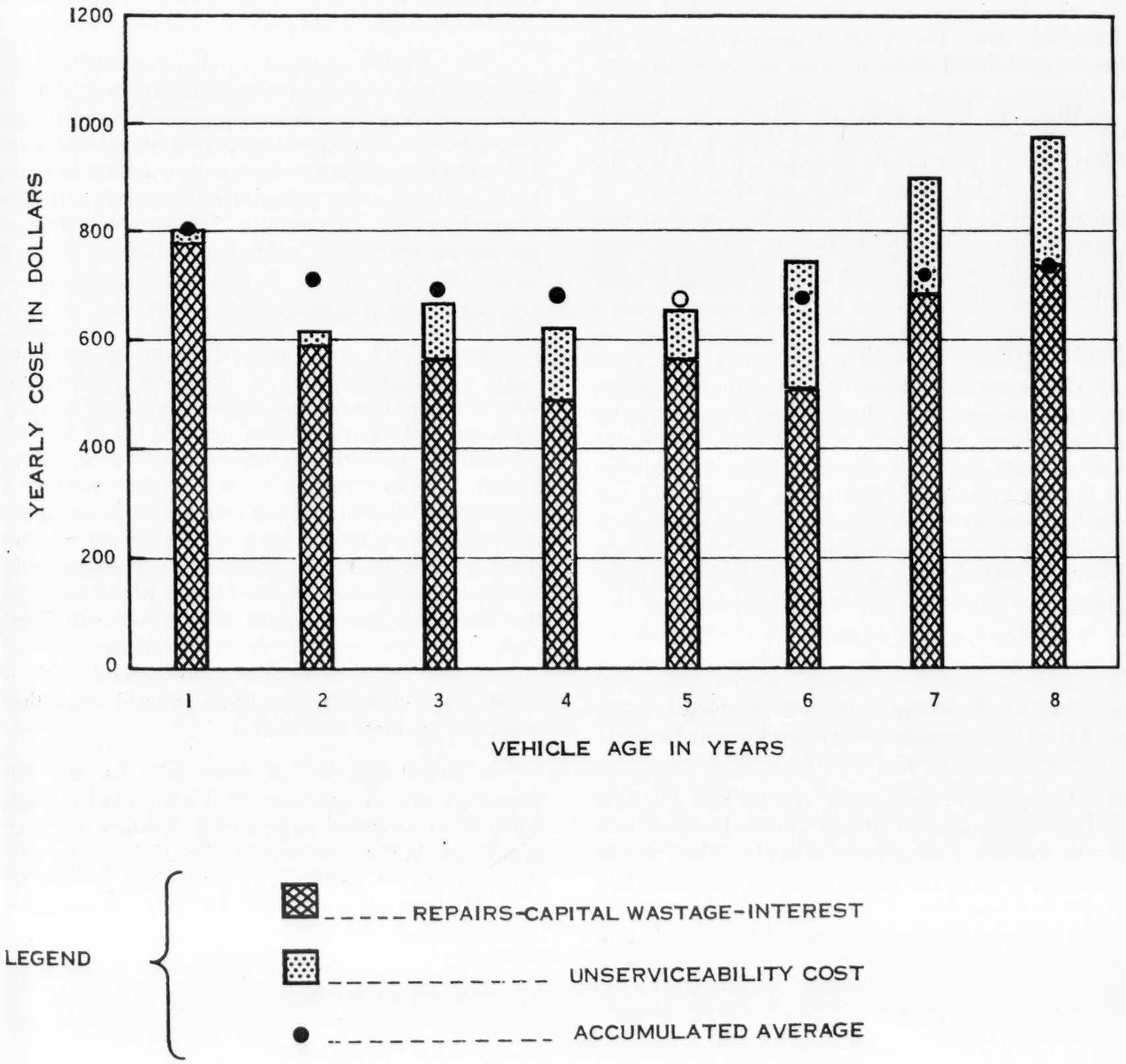
In determining the costs of vehicle operation, there are many factors, both direct and indirect, and it would be extremely difficult from an operational and accounting standpoint to obtain good data for all of these. Fortunately, many of the costs such as licenses, tire wear, insurance, gasoline and oil consumption are directly proportional to time or to mileage. These factors may be omitted since they will be essentially the same for new and old vehicles in similar service.

Eventually, the following factors were selected as being the most important in establishing the optimum replacement age: capital wastage, interest, repairs and unserviceability. The last factor, unserviceability, refers to the costs incurred when a vehicle is unavailable for service because of mechanical breakdown.

Optimum Replacement Interval

Consider a hypothetical vehicle whose costs are the average for similar vehicles in a fleet. A bar chart may be drawn, Figure 11—Average Cost for Similar

Figure 12 – Vehicle Replacement Analysis



Vehicles, which shows the costs of capital wastage, interest and repairs during each year of the vehicle's life. Ignore for the moment the very real costs arising from unavailability of the vehicle when it is unserviceable. It will be noticed that capital wastage (derived from market figures) and interest decrease with age while repair costs tend to increase. Using the same cost data, points may be plotted which show the cumulative average cost per year for replacement at different ages. It will be clear, after a little thought, that the correct replacement age is given by the age which results in the lowest cumulative average cost.

In this diagram, based on purely arbitrary figures, the optimum replacement age is six years, although the hypothetical vehicle had its lowest annual cost in the fourth year. For a complete solution, the chart must be re-drawn with added unserviceability costs. The optimum replacement age can then be established under the four factors considered.

This has been done in Figure 12, Vehicle Replacement Analysis, where the costs of unserviceability in each year of the hypothetical vehicle's life have been added to the other significant costs — capital wastage, interest and repairs. The optimum replacement age is found to be five years here since the cumulative average costs are a minimum for this replacement policy.

Dynamic Replacement Policy

This system of determining the optimum replacement age has one major drawback in that it requires data extending back over several years. With the rapid changes that have characterized our economy, old salvage values and repair costs are unreliable as a basis for predicting future costs. Fortunately, it is possible by a dynamic method to circumvent these difficulties and obtain a solution which exhibits both current capital wastage and current repair costs.

The basic idea is as follows:

(1) For each group of similar vehicles with relatively equal mileages, costs are obtained for capital wastage, interest, repairs and unserviceability incurred in the past year only.

(2) The optimum replacement age for this group is then determined as already outlined, except that the following assumption is made. The costs to be expected in the future years of a vehicle's life are best represented by the corresponding costs for vehicles of equivalent age. For example, the average repair cost last year for three-year-old trucks is used to predict future costs in the third year of truck life.

It is then possible to plot graphs showing optimum replacement age. The parameters are vehicle age and average mileage per year. The curves will all be based on the most recent data, less than one year old, and provide fleet management with a clear-cut basis for replacement policy.

Another feature of the analytical system lies in the form of the repair cost data. This has been organized for the detection of significant changes in repair costs. By the use of appropriate statistical techniques, it is possible to assert whether repair costs are attributable to changes in garage operations, or are merely due to sampling error. Also, the control system permits the detection of "lemons", that is, vehicles whose repair costs greatly exceed the average.

The vehicle replacement policy just outlined was accepted by management some years back, but its implementation required extensive changes in our methods of collecting and analyzing operational data. The effective utilization of the new policy has now been achieved, and present indications point conclusively to the realization of substantial savings in the cost of operating the Hydro fleet.

SUMMARY AND CONCLUSIONS

Some of the problems outlined in the preceding pages — notably those on inventory control and vehicle replacement — are common to many kinds of business, and the techniques described may be used in arriving at better solutions. Of necessity, the author has been forced to restrict the number of illustrations, and indeed the length of the treatment that has been given to each. Suffice it to say that there are a wide variety of common business problems that lend themselves to this sort of analysis, and that few Canadian businesses could not benefit financially from the application of operations research methods to these problems. The method itself is costly, but — properly handled — should more than repay the business that tries it.

It seems clear as we enter the '60s that this important new management tool has passed through much of its awkward stage and is destined for much greater use in the next decade. Certainly, its potentialities are by no means fully recognized, and as far as applications are concerned, the surface has scarcely been scratched.

The Social Effects Of Advertising

Advertising has been under the fire of critics from many fields. In this paper, a Canadian sociologist examines the effects that advertising has had on personal values and the social system of this country.

RAYMOND BRETON

It is generally accepted that the success of advertising depends to a great extent on the ability of its practitioners, either through intuitive skill or through research, to trace out people's tastes and values and make significant use of them—the manipulation of the popular symbols. Advertising thus constantly draws from the existing culture. It very seldom introduces new values into it. In this sense, the social effect of advertising is not one of innovation but rather one of reinforcement and stimulation of elements already existing in the culture. Advertising is adjusted to fit the needs, values, emotions, and tastes of the population.

If advertising does not add to the value system, it nevertheless has an effect on it: *its effect is that of changing the rank order of values.* Some values which were relatively unimportant a few years ago have gained significance through the skill of the advertiser. And through the emphasis given to them in advertising, they presumably have acquired new weight in the determination of people's behaviour. Cleanliness, newness, prestige, comfort, sexual gratification are among the values which rank higher today than they used to.

When I say that advertising very seldom introduces new values in our culture, I do not mean that its effect is only superficial. Changes in the rank order of values can produce far-reaching effects, especially when we are concerned with values surrounding family life, patriotism, or sexual behaviour.

CLEANLINESS AS A SOCIAL VALUE

In advertising, some values are emphasized, and their significance grows out of proportion with the remainder of the value system. As an example, let us consider the case of "cleanliness". A few years back it was not given much attention. Not too long ago, even the medical profession did not consider cleanliness of prime importance. According to Dr. Howard Haggard[1] it is only in the middle of the 19th century that cleanliness became a must. In the population at large, it is now a basic element of personal hygiene, although some people of course still neglect it. There has been tremendous diffusion of this value, and we can safely say that advertising has contributed to its enhancement. However, it has been overdone, and in two ways: First, many people are becoming too compulsive over it; their nostrils are oversensitive; they feel the constant threat of an invasion by germs. Second, it seems to me that cleanliness has been endowed with too many powers. It is supposed to give you distinction and sociability; it changes your personality; it puts a smile on your face and a glow in your eyes. Social relations have suddenly become easy for you; people you want as friends will be attracted to you. Attractiveness will become a part of your personality. Women find husbands and men find wives in a matter of days because bad breath has been removed through the use of one of these marvellous products, or because dandruff has been eliminated with the proper hair tonic. Your sociability depends on the use of the right ointment, the right oils, soaps and perfumes; it depends on your clothing, on the qualities of your physical attire.

In my opinion an excessive valuation of physical cleanliness can be detrimental to the importance given to other characteristics of the self. Cleanliness is de-

[1]Haggard, Howard W., *Devils, Drugs and Doctors* (New York: Harper and Brothers, 1929).

sirable, but from certain advertisements you get the impression that it can replace more fundamental personal qualities.

INDISCRIMINATE USE OF VALUES

It was stated earlier that advertising makes use of values and sentiments already present in the culture. It borrows from the culture to achieve its purposes. This is part of the very process through which it operates. *However, it seems to me that advertising is being quite indiscriminate in its borrowings.* It makes use of nearly any value except, of course, those that are outrightly condemned in the ethics of our society. But apart from this restraint, it appropriates to itself nearly any value that is thought useful in the selling of a product.

It is my opinion that some values and sentiments are not fit for the marketplace. They are not relevant to the commercial enterprise. I am thinking, for example, of values that have to do with the family or with the nation. Their introduction and use in commercial advertising can only have the effect of undermining their significance in people's minds.

Take "Canadianism", for instance. It is a value and sentiment that is at present rapidly spreading in the population. Many people are adopting it, and as a consequence are already changing some of their attitudes. Many groups, organizations and institutions are promoting "Canadianism"; it is presently used on the political platform, and advertising also seems ready to put a heavy foot on it.

Let us look at some of the possible effects of the exploitation of values such as "Canadianism" in commercial advertising. But first, we must remind ourselves of an essential feature of advertising: present-day advertising does not consist only in informing its audience about certain commodities; it also has the purpose of exerting influence on those who are exposed to it, in order to get them to acquire it. To achieve this end, it focuses upon the desires of the consumer; it appeals to the emotional tendencies of its audience. It cannot provide a treatise on the subject and convince by a rational argument. To influence, it is more efficient to call upon the non-rational desires of the individual. Because advertising functions in such a way as to emphasize the non-rational aspects of a value, it can only be detrimental to values that are not primarily concerned with physical well-being. "Canadianism" is such a value, and its emotional component is already sufficiently developed; perhaps too much. We have not yet been very critical about it. Its spreading is encouraged nearly on all fronts, and we have really never debated whether it was appropriate to cultivate it or not. We certainly need more rational thinking on the question, not an emphasis of the non-rational elements through advertising or other means.

MORAL OBLIGATIONS IN ADVERTISING

Let us consider another aspect of this question. Ordinarily, such values as those that have to do with the family or the nation carry a sense of moral obligation. These values are morally binding. They have a "must" attached to them. One feels morally obligated towards his country and his family. One feels that he must care about them and that he has some responsibilities with respect to their well-being and security.

When advertising uses these values, it appropriates a touch of the moral obligation that is carried by these values. McLuhan describes an advertisement "that promises the modern housewife a means of doing physical work without hating the husband who has trapped her into household drudgery.[2] And then he comments that "to purchase gadgets that relieve this drudgery and thus promote domestic affection is, therefore, a duty, too. And so it is that labor-saving appliances are used with moral fervor".

Another example can be taken from the field of insurance advertising. Every now and then we notice an advertisement trying to convince the reader with an argument that goes about like this: "If you are not a lousy and irresponsible husband and father, you must buy some life insurance to protect your family in case something happens to you." This type of advertising is simply trying to make you feel that it is a moral duty for you to buy insurance, that it is part of your responsibilities as a husband and father.

Moreover, may I draw your attention to the fact that this "you-owe-it-to-your-family" type of argument is sophistical. It does not stand logically. It may be true that if you buy life insurance, it shows that you care for your family, but the reverse is not true. That is to say, if you are a responsible husband and father, it does not necessarily follow that you should see to the security of your family by means of life insurance. There are other things you can do for the security of your wife and children, such as buying a house or investing on the stock market.

STATUS SYMBOLS IN ADVERTISING

Advertising is exploiting for its purposes the natural phenomenon of interpersonal comparisons and evaluations. Human beings evaluate each other on a number of criteria. This is a basic characteristic of

[2]McLuhan, H. M., *The Mechanical Bride* (New York: The Vanguard Press, 1951).

social life. However, this phenomenon, like any other, can grow into enormous proportions. People can and frequently do become overconscious of and over-preoccupied with the prestige dimension of human social relations. In my opinion, advertising makes a contribution to this overconsciousness.

Every material object can be made a symbol of social status. The kind of liquor one drinks, the kind of car one drives, the kind of clothes one wears, the kind of cosmetics one uses, can be and are in fact used to make differentiations among people. Motivation research has revealed that the value of an object as a status symbol has a substantial effect on the behaviour of the consumer. So advertising joins the game and tries to make the more out of it. Let us examine what can be some of the effects of this emphasis on status and status symbols, of which advertising is, of course, only partly responsible.

In our society, there are quite a few people who are experiencing social mobility; that is, who are actually improving their status positions. This massive mobility is made possible mostly through changes that have taken place, and still are taking place, in our expanding economic and social organization. These people are already very preoccupied with their own social status, with the new positions they have achieved, and with the amount of prestige they can credit themselves for. They are also preoccupied with the status of their friends, their neighbours and co-workers. For many people, this situation yields a good load of psychological and social strains. Many feel insecure in their new social positions. They perceive other people's desire to climb as threats to their own situation. Many of them also have some difficulties in their relations with the friends and relatives they left behind. They do not feel as much at ease with them; they do not want to be snobs, but they nevertheless feel that they are now living in a different world. These are some of the tensions that frequently accompany changes in social position. These tensions and their effect on people's personality and behaviour are not produced by advertising. However, I think that advertising, by contributing to making people still more status and prestige-conscious, contributes to increasing these tensions.

There are, of course, many people who do not change their social positions. Some of them, however, are witnesses to the promotions of their friends and relatives. It makes them frustrated to see themselves remain low in the social ladder. The solution to their problem is found in the faithful and handy advertisement. The recipe is quite simple: if you drink a certain brand of liquor, it will do it for you; it will give you distinction and prestige. However, if you are really ambitious, this will by no means be sufficient. In this case, what you need is the right kind of suit, or even better, you ought to get yourself a car; not any car, but the right kind of car; the car that will make people look up to you. With this car in your possession, you will be able to look down on others; you will feel that you have really achieved something, that you have acquired genuine distinction.

There seems to be in advertising an exaggerated tendency to turn everything into a status symbol, into an element of social differentiation. Such exaggeration can ruin the very heart of human relations. Social relations that are non-threatening, free-and-easy, or friendly perform a very important function in the integration of personality. An exaggerated emphasis on the prestige dimension of these relations can render them threatening and consequently harmful to the personality.

MATERIAL EMPHASIS AND ADVERTISING

It has been mentioned that people rank each other in terms of a number of criteria. Knowledge, money, occupational skills, physical strength, can be such criteria. One is ranked high or low according to the amount of either knowledge, money or skill he possesses.

Advertising is concerned with material goods. As such, it will then give importance to the possession of material objects as a criterion of prestige. In advertising, distinction is a matter of consumption rather than the possession of skills or of other personal characteristics. Here, we see once more how advertising stresses particular values and thus brings about changes in the rank order of values.

The omnipresence of advertising is in itself *the carrier of a certain value*: *that is, of mercantilism or commercialism.* With advertising completely surrounding you, you never leave the marketplace. You are constantly reminded of buying. There is everywhere a hidden salesman addressing you or trying to seduce you. Buying and selling—this seems to be the motto of our society. It's on the radio, on television, in the newspapers and magazines. It's delivered to your door; it's dropped in your mailbox. It surrounds you on the street. It follows you on the highway. You go to school, and it is there at least on book covers. You go to church, and you frequently find it even there, on the parish bulletin. Advertising perpetually reminds you that over and above all you are a consumer.

Advertising re-creates everywhere the atmosphere of the marketplace. It keeps us preoccupied with the problem of obtaining material goods. David Potter remarked that advertising surrounds us with a universe of images of plenty, of abundance.

He raises the question of "how the citizen in a consumer society can be educated to perform his role as a consumer, especially as a consumer of goods for which he feels no impulse or need".[3] And to this question, he answers that the consumer of our society must be educated and that "the only institution which we have for instilling new needs, for training people to act as consumers, for altering men's values, and thus for hastening their adjustment to potential abundance is advertising". That is why, he concludes, "it seems valid to regard advertising as distinctively the institution of abundance".

Advertising speaks the language of abundance and consumption. There is plenty available and we should want plenty for ourselves: this is perhaps the most important message of advertising. And, as already mentioned, it imposes on itself practically no constraint on the diffusion of its message. Max Lerner describes in this way the eagerness of advertising to keep the consumer to the performance of its duty, that is, buying: "If the American women were in danger of forgetting a moment about clothes and cosmetics, lingeries and nylons, and 'foundation garments', deodorants and perfumes, the advertisers make sure the lapse is brief."[4]

ADVERTISING AND ARTISTIC STANDARDS

Another effect of present-day advertising is that it helps to develop poor artistic standards in popular tastes. We are used to thinking that art is only in the museum. We have a tendency to disregard the artistic aspect of the objects we use and of our environments generally and how it contributes to shape our idea of beauty, elegance and grace. Our tastes in artistic matters may be determined by what we learn in school and by the intellectual reflection we carry on during our adult life; but they are also largely influenced by the composition of the environment we live in. The design of our car, of our home, of our clothes—all have much bearing on what we think is beautiful. Our ability to appreciate paintings, for example, is certainly related to what our sense of beauty becomes from exposure to the "practical arts".

Advertising is one of the "practical arts" to which we are daily exposed. Although it appears obvious that some advertisers take great care to produce something which is artistically respectable, many others only contribute to the education of poor artistic standards. (Whether these advertisers are conscious of it or not is beside the point.) One of the ways through which advertising does this is by its lack of subtlety. Advertising is much too eager to catch the attention of the passer-by. It does not suggest things to its audience; it blows it into its eyes and ears. Advertising wants to be big and flashy—so much, that it frequently loses the sense of proportion. Sometimes it becomes ridiculously extravagant. You have all noticed, for example, the little shop or restaurant, sometimes located in the basement of a building, which has been fixed up with one of these huge panels advertising cigarettes or soft drinks.

ADVERTISING AND FALSE SECURITY

It should also be mentioned that the writer has the impression *that advertising frequently gives a false sense of security to the consumer.* What I mean is that many people feel that the very fact that it is advertised gives value to a product. The more it is advertised, the better they feel the product is. It is my impression, for example, that much movie advertising is based on this illusion existing in the public. Some films are intended to be box office successes, and the advertising is organized consequently. But the feeling that if it is heavily advertised it must be good is certainly not limited to movies. It covers many products. This is unfortunate, since it has a tendency to take the attention of the consumer away from the quality of the product itself. It is also unfortunate because it forces competing firms to invest more in competitive advertising, which yields the final result of increasing the costs of the product.

ADVERTISING AND DECEPTION

Finally, advertising uses deception to promote products[5] just as some politicians practise deception in their campaigns and dealings. And certainly, both contribute to the formation of the "it-is-dishonest-but-normal" attitude. People get to believe that deception is bad, but it is to be recommended if you really want to reach a certain end, and sometimes it is the only way to get what you want.

The reading of *Consumer Reports* provides many examples of this phenomenon. About the drying time of some furniture paints, C.R. reports that "Although high-gloss furniture enamels commonly are referred to as 'quick-drying', none of those tested dried really quickly. Most took five to eight hours to dry through. (For example, despite the phrase 'Four Hour' in the brand name of the ..... enamel, two ..... colors were in the five-to-eight-hour group, and the third took over eight hours to dry through)."[6]

In another issue, *Consumer Reports* states that "the nation's dentists called false toothpaste advertising 'reckless' and 'vicious' at a recent hearing of the Government Operations Subcommittee . . ." They

[3]Potter, D., *People of Plenty* (Chicago: University of Chicago Press, 1954).

[4]Lerner, M., *America as a Civilization* (New York: Simon and Schuster, 1957), p. 602.

[5]I am indebted to Mr. Steve Brott of Ronalds Advertising in Montreal for his valuable suggestions concerning this aspect of the problem.

[6]*Consumer Reports*, July 1959, p. 374.

quote from Dr. Pearlman's analysis of some advertising claims (Dr. Pearlman is the assistant secretary of the council on dental therapeutics of the American Dental Association). For instance, about a certain toothpaste advertised as containing an ingredient which stops decay "cold", Dr. Pearlman writes: "This line of advertising is nothing but outright deception. The 'Mighty Mouse' series of TV commercials, beamed at children several times a week, is even worse from the standpoint of ability to confuse, mislead and establish bad dental health concepts."[7]

These are illustrations of the use of deception of advertising and as Dr. Pearlman's comments indicate, such practice can influence not only moral concepts but also important parts of the people's knowledge. It suggests that some regulation is necessary and urgent in these matters, either through legislation or through some other system.

[7]*Consumer Reports*, September 1958, p. 487.

SUMMARY AND CONCLUSIONS

In summary, then, advertising tends to draw on established values in our community, changing the rank order of values in an indiscriminate manner. More specifically,

1. It plays heavily on moral obligations, and through fallacious reasoning attempts to make certain behaviour more acceptable morally than others.

2. It exploits status symbols, making people prestige-conscious and thereby creating social tension.

3. It emphasizes material values and distorts their true position in society.

4. It helps develop poor artistic standards in popular tastes.

5. It frequently gives the consumer a false sense of security.

6. It uses deception to promote products.

STOCK SPLITS IN CANADA

A preliminary survey of stock splits in Canada between the years 1948 and 1957 inclusive, conducted by the University of British Columbia, showed that the two most active years in the period studied were 1951 and 1956, during which 23% and 13% respectively of the total split-ups took place. Interestingly enough, the years 1951 and 1956 mark apexes of a rising Dow-Jones Stock Average.

Returns received in connection with the U.B.C. study indicated that in almost 90% of cases, the project of splitting the shares was initiated by the corporate board of directors. Returns also showed that about three-quarters of the corporations splitting their shares chose to recall outstanding certificates and issue a completely new set of securities. This approach was more popular than the alternative of issuing additional certificates to supplement original shares.

In analyzing the general motives and objectives which prompted splits in Canada, it was found that they roughly paralleled those cited in earlier U.S. studies. Returns from the University of British Columbia survey showed that 93% of the companies claimed wider distribution of the shares as a primary objective; this compared to U.S. results of between 90% and 93%. The wider distribution comes about not only because the resultant reduced market value per share attracts a new class of buyer, but may also stem from the inevitable publicity following announcement of a split, and the fact that some investors may sell all or part of additional stocks received. Theoretically, a greater number of shareholders lends eventual stability to the market price, affects the market price favourably and increases the chances of new capital being successfully raised through use of stock-rights.

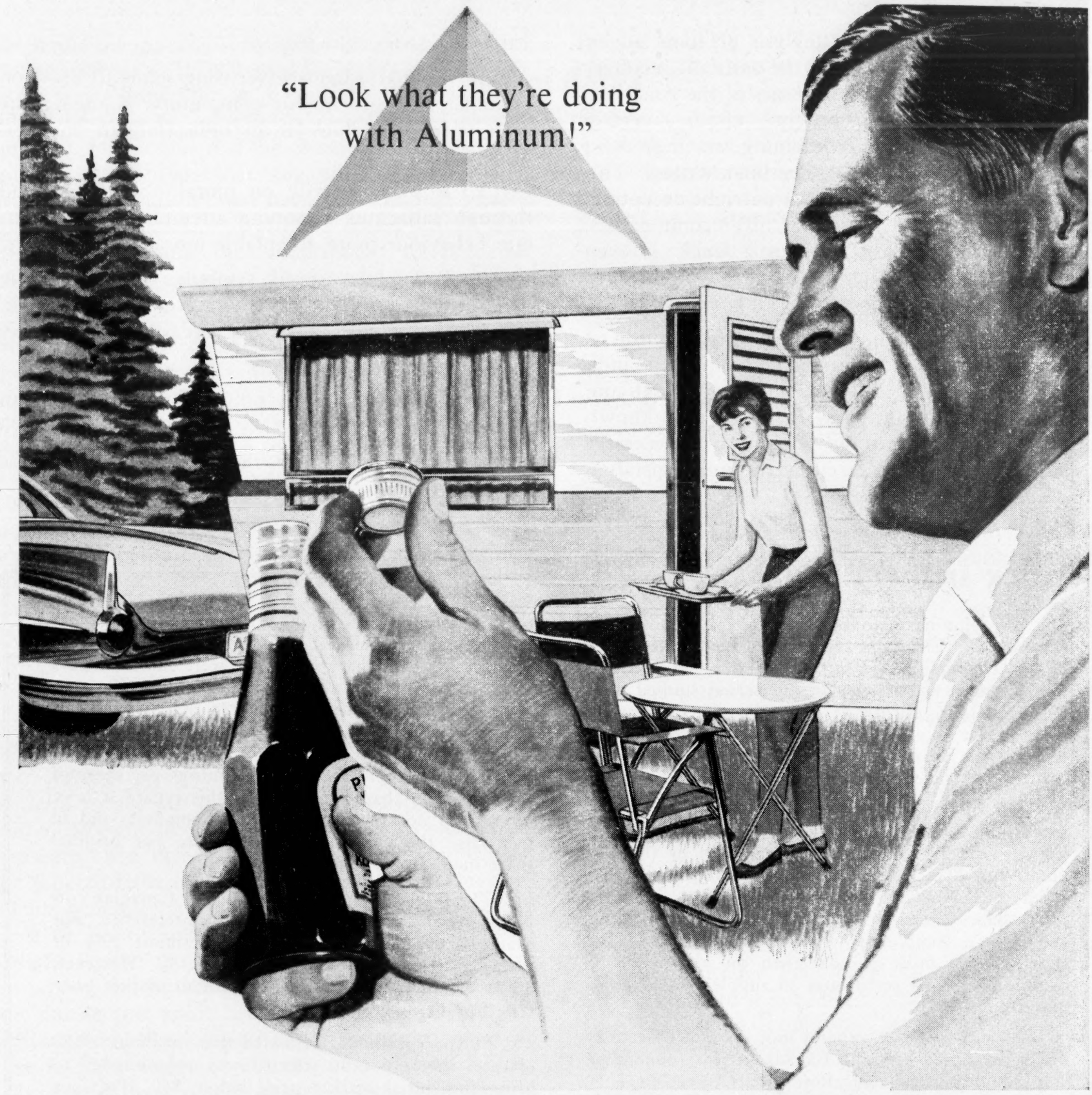
Actual findings showed 63% of the corporations having as an auxiliary objective, pricing of the stock to suit tastes of certain investors. Twenty-eight per cent of the returns had future financing in mind. Certain other auxiliary objectives were indicated to a lesser extent, but are nevertheless significant. Twenty-seven per cent of the replies stated that it would be more difficult for "outside" groups to gain control, while 7% indicated the split to be an attempt at camouflaging sharply climbing earnings per share of dividends per share, or both. In this regard it is of interest to note that 61% of the companies did in fact raise the effective dividend rate per original share immediately following the split.

The ratios of split ups, selected by Canadian corporations, indicated no strong single preference. For example, the ratio 2:1 was used by almost 29% of cases, and the split ratio 4:1, by 21.7%. However, 85% of replies stated that the resultant market price was the sole determinant.

Further, it should be noted that in almost 97% of cases the split ratio selected was one designed to bring the initial market price below $40. Previous to the split, the market price per share exceeded $51 in 53.1% of cases.

Some 6% of Canadian concerns had increased dividends accompanying the split. Though in 75% of such cases, immediate price increases were noticed, in only 59% of such cases did the appreciation appear to have a lasting effect. Where dividends remained unchanged, immediate price increases were evident 70% of the time, but proved of longer duration in only 33% of cases.

Where the dividend rate was not increased, 55% of corporations reported significant increases in shareholders within the period of a year. Where the dividend rate was increased, in over 75% of cases significant increases in the number of stockholders was indicated.



"Bottle tops and house trailers. Everyone's using aluminum. Why not in our products?"

Every day seems to see new developments that are taking advantage of versatile aluminum's unequaled combination of qualities: its lightness, strength, corrosion-resistance and bright enduring beauty. Its possibilities are practically endless, and its uses continue to grow with the development of new alloys, improved fabricating and welding techniques and a growing consumer demand.

PERHAPS ALCAN ALUMINUM AND ALCAN "KNOW HOW" CAN HELP YOU IN YOUR BUSINESS . . .

ALCAN are the people to see about everything concerning aluminum. They are leaders in its development and set its standards of quality. ALCAN has over fifty years' experience in aluminum and is the major source in Canada for sheet, wire, rod, bar, foil, extrusions, castings and ingot.

ALUMINUM COMPANY OF CANADA, LIMITED

An ALUMINIUM LIMITED Company

Quebec • Montreal • Ottawa • Toronto • Hamilton • Windsor • Winnipeg • Calgary • Vancouver

ALCAN

Canadian Taxation and the Businessman

K. W. LEMON, F.C.A.

With the ever-increasing complexity of our tax law, Canadian businessmen will look with growing envy on their United States counterparts who can obtain advance rulings from their Internal Revenue Service before venturing into the tax jungle which may surround a proposed business transaction.

The Canadian authorities have always taken the position that it is not practicable for them to issue formal binding rulings as to the tax consequences of a proposed transaction prior to the actual event. This has left the Canadian taxpayer in the position that he must proceed with his transaction without prior clarification of the application of the tax law and then wait, in some cases for years, until the matter is dealt with on assessment. Even in those occasional cases where written advance opinions can be obtained from representatives of the Department of National Revenue, there can be no absolute certainty as to the final outcome due to the old premise that the Crown cannot be bound by the actions or errors of its servants.

Experience in the United States has established the value and practicability of binding advance rulings. Since 1938 the American tax authorities have had statutory authority to issue advance rulings on prospective transactions and this practice is now well established. In more recent years the procedure for issuing such rulings has even been simplified in order to increase their availability to the tax-paying public.

The advantages of advance rulings to a taxpayer are obvious. The tax consequences of any proposed transaction are ascertained in advance and the taxpayer is no longer subject to the unpleasant surprise which can result from an adverse assessment issued some years after the event. Even an adverse ruling can be of value to the taxpayer as the known tax consequence can then be taken into account as a factor in the consideration of the transaction or, in some cases, changes can be made to achieve more favourable results from the taxation standpoint.

Advance rulings should also provide benefits to the taxation authorities, such as the handling of the case in a shorter time than that required at present, and less resistance from a taxpayer.

In order for the procedure to be practicable, however, it is suggested that advance rulings should be given only in cases where full information is provided and that the authorities should not be expected to rule in hypothetical cases. Further, rulings could not be binding in cases where full information was not disclosed or incorrect information was provided.

Areas in which advance rulings would be particularly useful include:

(a) The determination of undistributed income or designated surplus—
  (i) Prior to an election to pay the special 15% tax.
  (ii) In anticipation of the purchase or sale of a company.

(b) The valuation of goodwill—
  (i) In anticipation of the incorporation of a business.
  (ii) For purpose of the allocation of a proposed purchase or sale price of a business interest.

(c) The effect of corporate mergers or re-organizations in certain specific circumstances.

(d) The determination of taxable benefits which may be conferred by proposed transactions.

(e) The establishment of "fair market value" of securities and other property—
  (i) For purposes of proposed non-arms-length transactions.
  (ii) In connection with proposed gifts.
  (iii) For purposes of benefits which may be conferred.

It is to be hoped that the matter of advance rulings will be given careful consideration by our legislators and that suitable steps will be taken in the near future to provide this very useful service to Canadian taxpayers.

Canadian Law and the Businessman

PETER V. V. BETTS

When government requires property for public purposes it may, in effect, take the property subject to the right of the owner to compensation in money. This is the process known as expropriation or compulsory taking, and is available by statute to Federal, Provincial and Municipal governments, certain Public Utilities and even some private corporations. Unfortunately, there is no uniform procedure for this process and the result could vary somewhat with the expropriating power. However, the law under most of the expropriating statutes in Canada appears to be the same on two fundamental points; first, from the moment of expropriation (sometimes even without notice) the owner has lost his title and gained only the right to money compensation, and secondly, the amount of that compensation is to be based upon the value to the owner at the moment of expropriation.

Both these propositions were before the Court in City Parking Limited v Toronto 1959 O.R. 562 dealing with the expropriation of a lease. One Rottenberg owned valuable downtown property and rented it for a parking lot to City Parking Limited. The lease was for 10 years and the rental was $770.00 monthly or 50% of gross revenue from parking, whichever was the greater. Two months later Toronto expropriated.

Presumably, the compensation offered by Toronto to the owner was accepted by him without resort to litigation, because nothing more is heard of him, but the tenant claimed that it too had a very real interest in the property and battle was joined. There is no doubt that a leasehold interest is capable of expropriation nor that compensation therefore must be made to the tenant, but the problem of calculating the value of the interest expropriated turned out to be both difficult and interesting. The tenant, City Parking Limited, claimed that the value of the lease to it was approximately $50,000, being the present value of its anticipated profits from the lease over the 10-year period. Toronto pointed out that the value must be determined as at the moment of expropriation, only two months after execution of the lease and that both parties were experienced in business and both were dealing with one another at arm's length. Toronto therefore argued that at the beginning of the lease its value to the tenant was nothing—the rental in the lease must have represented the full market value, otherwise the tenant would have got a bargain. Toronto then argued, of course, that the lease could not have increased in value $50,000 in barely two months. The Court of Appeal agreed with Toronto, pointing out that while under certain circumstances the tenant might have made a profit of $50,000 out of the lease, it should not be assumed this was entirely attributable to the lease. No doubt it arose, in large measure, from the business acumen of the tenant, who had extensive experience in the operation of parking lots in the City of Toronto. Furthermore, it had also accepted the burden of a firm covenant to pay a minimum rent for the whole of the 10-year period through good times and bad amounting to $92,400. The lease thus could become a burden rather than an asset. At the moment of expropriation it had little value. In the final analysis the tenant was allowed approximately $5,000, representing largely the cost of improvements to the property made by it in the two-month period between the execution of the lease and the expropriation.

The case is of interest as casting light on the two principles referred to above. Toronto was adamant that nothing occurring after the expropriation be considered. The expropriation occurred 7th November, 1955 and the appeal was heard 2nd July, 1959. In the meantime, of course, land values had increased enormously and with them rental values, and perhaps one might be tempted to argue that the rental value, at least of a long-term lease, was there all the time dormant and that now, in 1959, by some process akin to hindsight, effect should be given to the increased value of the lease in 1955 at a time when the tenant may have seen the value and the owner did not. The Court rejected this argument, being content to observe that both were "shrewd operators", neither of whom would be likely to give the other a bargain and refusing to give effect to anything that happened after 7th November, 1955.

The second principle referred to earlier is that the basis of compensation is to be the value to the owner. In this respect Canada differs from most other jurisdictions, where the test is market value, although, as will be seen later, the distinction is sometimes obscure. The Canadian rule was finally laid down by the Honourable Mr. Justice Rand (as he then was) in the Supreme Court of Canada in Diggon-Hibben Ltd. v The King 1949 S.C.R. 712 at page 715:

> ". . . . the owner at the moment of expropriation is to be deemed as without title, but all else remaining the same, and the question is what would he, as a prudent man, at that

(continued on page 71)

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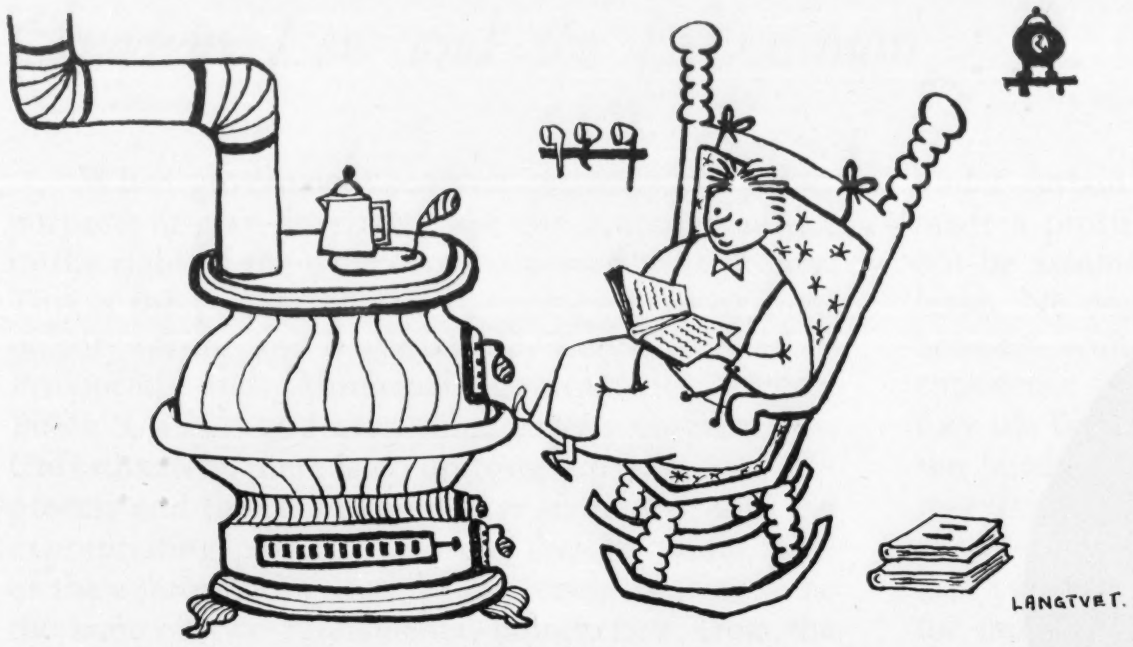

BOOKS FOR THE BUSINESSMAN

Reviewed in this Issue		*Reviewer*
FLAME OF POWER	Peter C. Newman	*D. S. R. Leighton*
THE INTELLIGENT INVESTOR	Benjamin Graham	*John F. Graham*
NATIONAL ACCOUNTS STATISTICS 1958	Department of Economics & Social Affairs of The United Nations	*J. G. Myers*
ADVERTISING AGENCY SUCCESS	Kenneth Groesbeck	*Donald H. Thain*
MANAGERIAL ACCOUNTING—AN INTRODUCTION	Harold Bierman, Jr.	*Samuel A. Martin*

FLAME OF POWER

by Peter C. Newman. Longmans, Green & Co., Toronto, 1959. 255 pp., $4.95.

Flame of Power has been billed by the author as "an examination in depth—the first of its kind—into the lives and motives of the businessmen who have been a major shaping force in Canadian history".

Reports indicate that this collection of biographical sketches of Canadian businessmen is well on its way to becoming a Canadian best-seller, its first printing sold out in a matter of months. This is all to the good, for our businessmen, both living and dead, have been far too little known to the general public. Perhaps Newman's success will encourage others to turn the spotlight on the men who do wield the economic power in Canada.

In our business-dominated society, it is vitally important that these men, their philosophies, and their motives be carefully examined and understood. The lack of knowledge of the Canadian public on this score is staggering, and the misconceptions that are held are positively frightening.

Unfortunately, however, Newman's book fails to live up to its billing on at least two counts—it is neither a study in depth, nor have the businessmen

SIR JAMES DUNN . . . *a major shaping force?*

described, with one or two exceptions, been "a major shaping force in Canadian history".

This does not mean that *Flame of Power* is without merit. On the contrary, it is entertaining, interesting, readable and at least mildly instructive. More important, in most cases it does attempt to present a balanced and fair picture of the businessmen whose lives are portrayed in its pages—E. P. Taylor, James Dunn, Herbert Holt, William Van Horne, Harry Oakes, Hans Lundberg, Lord Strathcona, Lionel Forsyth, the Steinbergs, Gilbert LaBine, and Donald Gordon. But this is not enough. *Flame of Power* reminds one of the succession of treacly movie "biographies" that used to be turned out of Hollywood in great numbers—entertaining bits of fluff, with important questions unanswered, and indeed, seldom if ever raised. Their resemblance to the subject's real life was at best remote.

So it is with Newman's book. Perhaps it was never his intention to write more than interesting vignettes of a collection of interesting men, and if so, we can do no more than say "Amen"—this he has done, and done well. If the student of business, economics or administration hopes to learn much from *Flame of Power,* he is going to be very disappointed. Not only does Newman pick a very odd collection of individuals to study, he seldom if ever gets below the surface to see what makes these men act as they do. His book is more a collection of interesting anecdotes and little-known facts that does little to bring its subjects to life and explain their success. This, and the sometimes overly-dramatic style, betray the author's background as a journalist and not a biographer or student of business, although the jacket does attempt to make much of Newman's university training in economics and commerce.

The logic, if any, to his selection of subjects is hard to ascertain. Perhaps the only common thread is that they are colourful, self-made men, which indeed they are. A more heterogeneous mixture would be hard to find—the promoter E. P. Taylor; the professional administrator Donald Gordon; the merchandisers *par excellence,* the Steinbergs; the scientist-mining man Lundberg. It certainly requires a considerable stretch of the imagination to describe the Steinbergs or Harry Oakes, to mention only two, as "major shaping forces in Canadian history".

Further, Newman attempts to draw some generalizations from *Flame of Power.* He claims that his biographies demonstrate "that the prime factor which changes a businessman into an executive is a gradual shift in his attitude toward work—a magic transformation that occurred to the men in my book at the point where their hearts and brains lost the energy to stay out of constant economic embroilment . . . Only the rare individual possesses the inner strength to brandish great economic power without distorting himself in the process."

I suggest that this conclusion is trite, oversimplified, and does not, in fact, flow from the book. Indeed it is at this point that I take greatest issue with Newman's pretensions. If he had been content to state that this is a nice, pleasant little unconnected series of sketches of some people who have been active in Canadian business in a variety of ways—which it is — then one could not argue with him. But to pose as an "examination in depth" of "major shaping forces" is gross misrepresentation, for such it most certainly is not. Such an examination, while overdue, will have to wait for another author and another time.

—D. S. R. Leighton,
Associate Professor,
U.W.O.

THE INTELLIGENT INVESTOR

Second Revised Edition

by Benjamin Graham. Harper Brothers, New York, 1959. 292 pp., $4.95.

This is not a new book, but because of its past popularity this up-to-date edition deserves to be reviewed. The principles for investment in marketable securities which Graham propounded in his other editions have not been changed. The only major change in this edition is the omission of the chapter on U.S. savings bonds. This is clearly of little consequence to most Canadian investors. Otherwise the book has been revised in light of the changed market conditions since the date of the last edition in 1954.

The book is written for the lay investor and is most readable. It does not delve deeply into sophisticated techniques of analysis that would probably bore the average reader. It is not a book for anyone interested in speculative techniques, since the basic approach is designed for buying for the long term. The approach Graham outlines is a general one, for the investor who is not interested in making money overnight but who can wait for the long pull.

The book's objective is to outline investment policies for two different types of investors: one which the author calls the "defensive" investor, and the other which he calls the "aggressive" investor. The defensive investor is defined as one who is primarily concerned with safety and who does not want to spend much time in making investment de-

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cisions. The aggressive investor is one who wants to maximize his return from investing and hence is willing to take more risk and devote time to evaluating alternative investment situations.

Mr. Graham's basic argument is that the investor should be concerned with one thing, and one thing only—value. If the investor would predicate his investment decisions on an informal appraisal of the underlying *value* of a security he would make many more right decisions than wrong ones. He outlines various methods and criteria for evaluating prospective investments. His advice is good, and if the average investor in marketing securities read and used this small volume there would be many more successful investors around today.

—John F. Graham,
Lecturer in Business
Administration,
U.W.O.

NATIONAL ACCOUNTS STATISTICS 1958

Published by The Department of Economic & Social Affairs of The United Nations. 257 pp., $2.50.

This recent publication contains detailed estimates of national accounts for 78 countries. This second edition of the yearbook for the first time contains detailed information on Bolivia, Bulgaria, Cambodia, China (mainland), Czechoslovakia, Germany (east), Iraq, Malta, Poland, Romania, Syria, Trinidad and Tobago. In addition the new yearbook contains a special International Summary of the principal aggregates for 83 countries and territories. Country estimates are shown, where available, for each of the following subjects for the years 1951-1957:

1. Expenditure on gross national product.
2. International origin of gross domestic product.
3. Distribution of the national income.
4. The finance of gross domestic capital formation.
5. Composition of gross domestic capital formation by type of capital good, by industrial use and by type of purchaser.
6. Receipts and expenditures of households and private non-profit institutions.
7. Composition of private consumption expenditure.
8. General government revenue and expenditure.
9. External transactions.

Tabulations are clear and simple to read and are presented in a form to facilitate international comparability. Important differences in concept, scope, coverage and classification have been described in notes which precede and accompany the country tables. The publication would provide valuable information for Canadian businessmen involved in foreign trade. It is available from Ryerson Press, 299 Queen Street W., Toronto.

J. G. Myers,
Instructor, U.W.O.

ADVERTISING AGENCY SUCCESS

by Kenneth Groesbeck. Harper & Bros., New York, 1958. 259 pp., $5.00.

The best way to describe *Advertising Agency Success* is to say that it is smorgasbord of the author's wide experience and often penetrating observations on the advertising agency business.

continued on next page

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Books for Businessmen — cont.

Section 1, entitled "Principles and Management", discusses starting an advertising agency; agency management problems, such as obtaining agency recognition status, financial organization, physical setup, and getting new business; selection, training, and compensation of employees; building a satisfactory client-agency relationship; agencies as seen from the client's point of view; new business presentations; and financial management. The second section of the book, "Functions and Performance", deals with selling an agency's services; the function and responsibilities of agencies in the United States; agency organization; copy writing and the creation of advertisements; psychology, marketing research, and public relations as related to agency operations; and a short concluding chapter on the future of the advertising agency business.

Because of its subject matter, this book will be of little, if any, interest to any readers except advertising agency personnel. And, to advertising agency personnel, it is of significance not because it is an outstanding book but primarily because there are so few books on the subject of agency management.

Although the author attempts to present an over-all view of the successful agency in operation, the wide scope of activities described—everything from advice regarding physical setup to an evaluation of the place of psychological research in agency operations — precluded comprehensive treatment of any one area. As a result, the book tends to be lacking in depth, rambling, disorganized, and, in a few places, trite and elementary. Nevertheless, for the agency management person there is enough worthwhile material to justify buying and reading the book if only to review some of the often-overlooked fundamentals of agency management about which little or nothing has been written.

Books for Businessmen — cont.

The sections of the book on financial management and the development of new business are perhaps the most worthwhile.

Since the author deals mainly with what Americans consider to be medium and small agencies, the thinking is appropriate to most Canadian agencies.

Should the reader be interested in reading books on the subject of advertising agency management, he would be well advised to obtain *Advertising Agency Operations and Management*, by Roger Barton (McGraw-Hill, New York, 1955), and *Advertising Agency Financial Management and Accounting*, by Ira W. Rubell (Funk & Wagnalls, New York, 1948) before purchasing this book.

Donald H. Thain,

Associate Professor,

U.W.O.

MANAGERIAL ACCOUNTING —AN INTRODUCTION

by Harold Bierman, Jr., The Macmillan Company, New York, 1959. 475 pp., $10.00.

This book is another attempt to bridge the gap between traditional decriptive accounting and the more recent "decision-oriented" or "managerial" accounting approach. It is a highly condensed text with a maximum of space devoted to the presentation of techniques and issues, and a minimum devoted to discussion or lengthy development of arguments.

The first section (slightly more than one-half the total number of pages) is devoted to conventional financial "introductory accounting".

continued on next page

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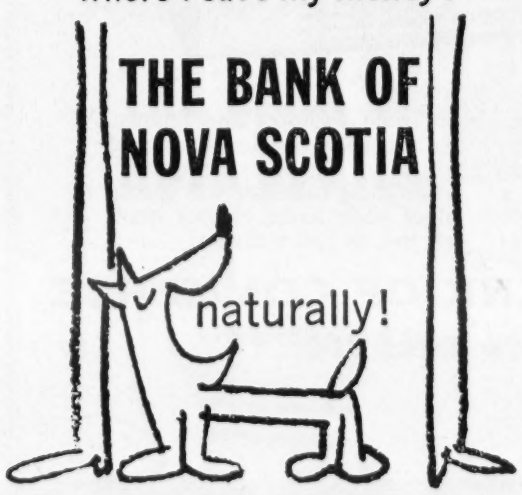

Books for Businessmen — cont.

Few innovations are made in the method of presenting this material, although a chapter is devoted to the concept of present value and its application to annuities, bonds, and depreciation — an important area often neglected or poorly handled in other texts. The author also introduces (in six pages) the basic concepts and purposes of consolidated statements, which is designed to give the reader an awareness of the major principles underlying their use.

Because the author covers so many topics in such a short space, he is able to devote little space to discussion. Theorists may take issue with such unsupported statements as the following (referring to the Accumulated Depreciation account) "It is a valuation account and nothing more."

While the section on Financial Accounting makes brief reference to management uses of accounting information, the second half of the book is devoted exclusively to the techniques and tools of the industrial or internal accountant. Topics discussed include budgets, direct costing, break-even analysis, accounting reports, capital budgeting and cost accounting systems. The last three chapters of the book are devoted to a discussion of the accounting problems arising from the changing value of the dollar. While the author apparently rejects the adoption of complete common dollar accounting, he is sympathetic to some method of adjusting inventories and depreciation accounting to a more realistic price basis. Each chapter is followed by a number of problems of various complexity.

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Books for Businessmen — cont.

To this reviewer's knowledge, *Managerial Accounting* includes a certain amount of very useful material not found in any one source at the present time. It is likely to appeal most strongly to non-professional accountants.

—Samuel A. Martin,
Lecturer in Business
Administration,
U.W.O.

Canadian Low and the Businessman
(continued)

moment, pay for the property rather than be ejected from it."

Applying this principle to a lease, the question becomes "what would the tenant, as a prudent man, at the moment of expropriation, pay for the lease rather than be ejected from the property?"

The rule is relatively easy to state but not always easy to apply. The learned President of the Exchequer Court has said he does not understand it. In this particular instance it almost looks as though the Court felt that "value to the owner" and "market value" were one and the same. While citing the former test the Court appears to have applied the latter.

In these days of increasing property values the case should serve as a reminder to businessmen to prepare their case immediately upon expropriation even if negotiations are proceeding happily with the agents of the expropriating power. Only an appraisal made immediately following expropriation is immune from the criticism of having been inspired by hindsight.

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